10¢ A COPY

The OIL WEEKLY

October 15, 1926 Volume 43. No. 4

Once a driller uses Harrisburg Forged Seamless Steel Couplings he keeps on using them

The man who has "tried 'em all" is through changing couplings when he strikes one that stands the hardest kind of work with no "back talk."

That's Harrisburg—the coupling without a weld or weakness. Forged Seamless from Special Double Strength Oil Field Steel; tapered and threaded to insure accurate stabbing and a tight seal without crushing the pipe.

Harrisburg Couplings will not crack, strip nor gall and have no piping to develop leaks.

Introduce your tubing, drill-pipe and casing to Harrisburgs—they'll become friends that never part.

Stocked and Sold by Leading Supply Houses

HARRISBURG PIPE & PIPE BENDING COMPANY
Harrisburg, Pa.

DISTRIBUTORS:

Harrisburg Pipe & Pipe Bending Co., of Texas, Inc., Houston, Texas
Harrisburg Supply Company, Tulsa, Okla.
George J. Hausen, Inc., San Francisco, Los Angeles and Taft, California

HARRISBURG

ANY TOOL ANY TIME ANY PLACE

OUR WAREHOUSE LOCATIONS

Located at points selected because of their convenience for serving you, you will find the Bridgeport plant. At many of these stores you will find not only drilling and fishing tools and wire rope but a complete stock of contractors supplies.

Our warehouses and branch stores provide for instant and immediate delivery of any tool, at any time and at any place. These stores were located on purpose for that purpose.

Each store has men on tower at all times, capable of being of great assistance to you if you use them and you will find every man ready and willing and anxious to give you a better service, quicker delivery than you can get anywhere else on earth.

THE BEST TOOLS—from one end of the string to the other

THE BRIDGEPORT MACHINE COMPANY

WICHITA KANSAS

BRANCHES

Wichita, Kans.* Russell, Kans.* Gorham, Kans. Eldorado, Kan. Winfield, Kans
Tulsa Okla. Stroud, Okla. Depew, Okla, Wetumka, Okla
Tonkawa, Okla. Garber, Okla. Braman, Okla.* Pawnee, Okla.*
Ranger, Tex. Panhandle, Tex.* Breckenridge, Tex.
Isom, Texas. Marietta, Ohio

*Complete stock of Contractor's Supplies carried here.

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 1716 Dallas Ave., Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

Congratulations

Miss Tulsa—
Queen of Beauty, High Priestess of Pulchritude —we salute you!

We salute you as fellow Tulsans, proud of the honor you have accorded us.

Fig. 601.

Knowing something of the merits required to forge ahead in the face of strong and worthy competition, we salute you with a full appreciation of your accomplishment.

To win in a local bathing beauty contest is honor enough. To be a victor in a nation-wide contest of victors is a tribute that comes to few.

Fig. 604.

Figure 601—[450 to 600 pound pressure] a sturdy pump designed for oil or water service. Extra long stroke gives straight line pull; practical absence of gasket surface adds to long, trouble-free operation.

Figure 604—Gaso Walking Beam and Power Pump for gas or vacuum. Constructed to stand world of abuse. For taking gas from pumping well or putting vacuum on well.

GASO PUMP & BURNER MFG. CO.
Tulsa, Oklahoma

ECLIPSE SAVE-A-LINE

Gives a Protective Film 5 TIMES THICKER than any Other!

LONE STAR GAS COMPANY

DALLAS, TEXAS

January 21st, 1924

Eclipse Paint Company,
Cleveland, Ohio.

Gentlemen:

For a number of years we have experimented with various kinds of pipe covering, watching results very carefully in different soils, in an endeavor to find a material which would protect the pipe under practically all conditions of soil. In these experiments, we have obtained joint and asphalt materials of various kinds, applied them in different localities and watched the action of soil and water very closely.

Our tests have shown your Asbestos pipe line paint very much superior to anything that we have been able to find and we thought you would be interested in this as our experiments have covered considerable ground, and we are convinced that our pipe is properly protected against corrosion.

Yours very truly,

E J Schmidt

EJSmith...

Corrosion, the destructive and costly enemy of your pipe lines, is effectively balked by the thick protective coating made by one application of Eclipse Save-A-Line to the pipe surface.

This extra thick film, reinforced with asbestos fibre, elastic and enduring, protects for many years against the corrosive action of soils caused by moisture, lime, alkali or electrolysis. The life of thousands of miles of pipe line has been extended by the protecting film of Save-A-Line.

It can be applied without heating and by inexperienced labor. Only one application necessary.

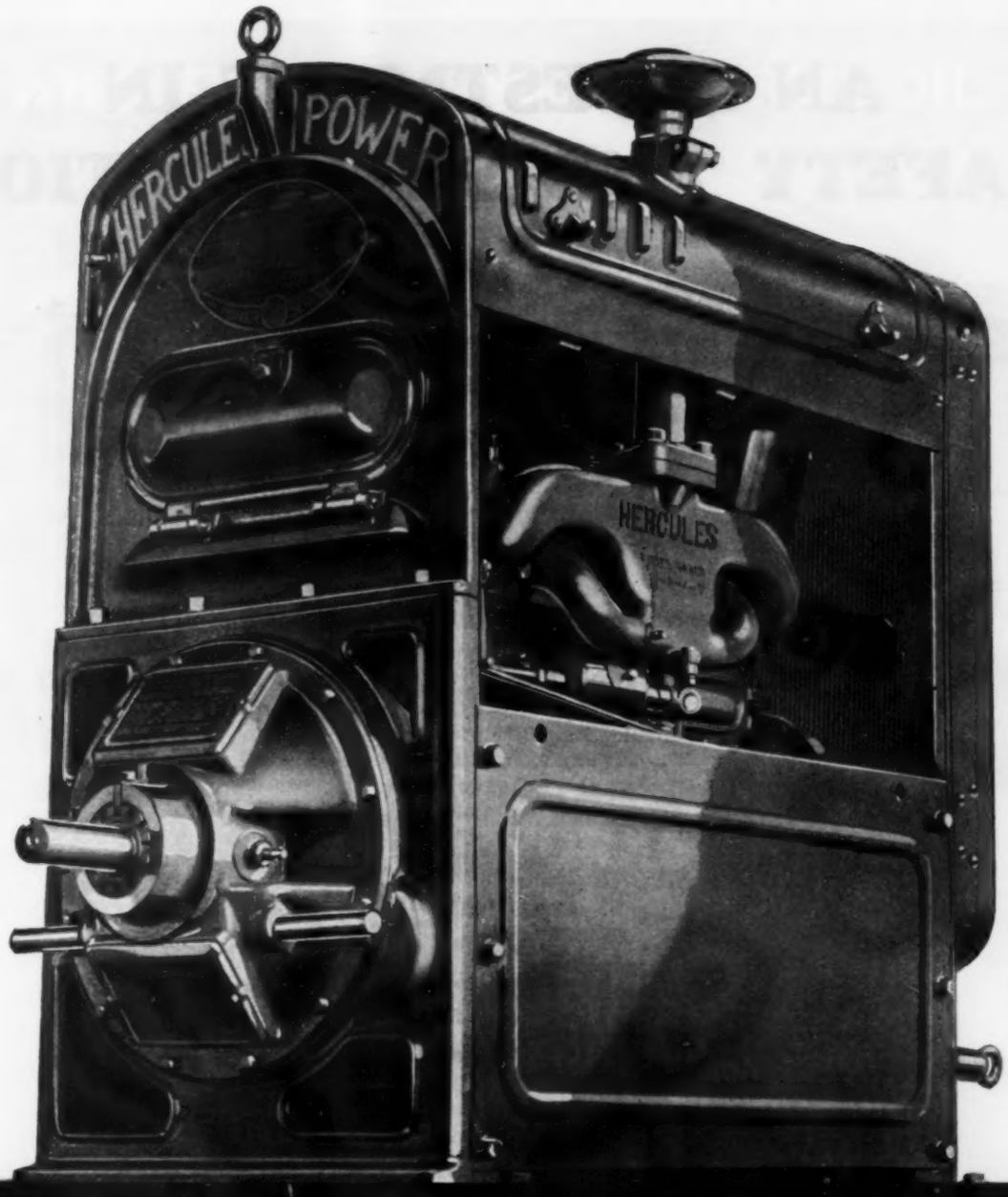
Let us know your requirements. We will be glad to send you sample and quote you prices. If you have any particular difficulties peculiar to your soil or climate, our Service Department is at your disposal.

A Few of the Larger Users of Save-A-Line

The Shell Company
Lone Star Gas Company
Humble Pipe Line Company
The Gulf Pipe Line Company
Associated Pipe Line Company

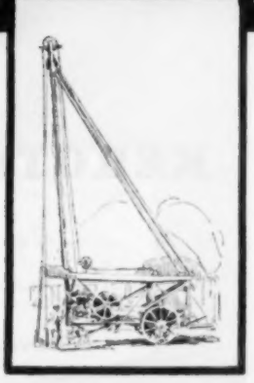
The Eclipse Paint & Mfg. Co.
Cleveland, Ohio, U. S. A.

Dallas Detroit Philadelphia San Francisco
Denver Newark Pittsburgh Charlotte, N. C.



HERCULES on the job ENGINES

Hercules Engines are not only
so rugged as they look
—and so sturdy as the name implies
—but always they deliver all the
operator expects—and more!



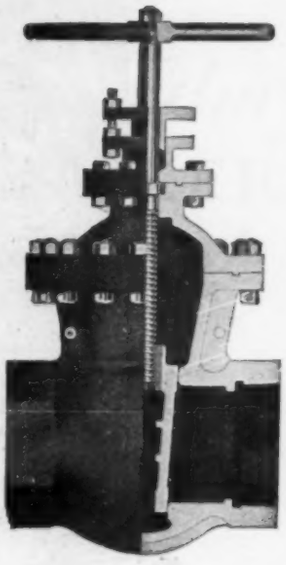
HERCULES MOTORS CORPORATION, CANTON, OHIO, U. S. A.

Say you saw it in The OIL WEEKLY

AN INVESTMENT IN SAFETY AND SATISFACTION

Safety is built into the very pores of the steel of the KEROTEST. The machining and assembling operations are carefully watched and checked on precision gauges during every step of construction. Kerosene, — because of its greater penetrability than water— under high pressure is used to search out even the tiniest flaw in the steel. In the valve body KEROTESTS have the distinct feature of receding seats, affording the greatest possible protection.

Leading oil field operators have adopted KEROTEST Valves and Fittings as part of their standard equipment. Let us show you why you too should be using this superior line of valves and fittings for your heavy duty service requirements.



VALVES KEROTEST FITTINGS

The World's Standard for High Pressure Service

Made By

KEROTEST MANUFACTURING COMPANY

Pittsburgh, Penna.

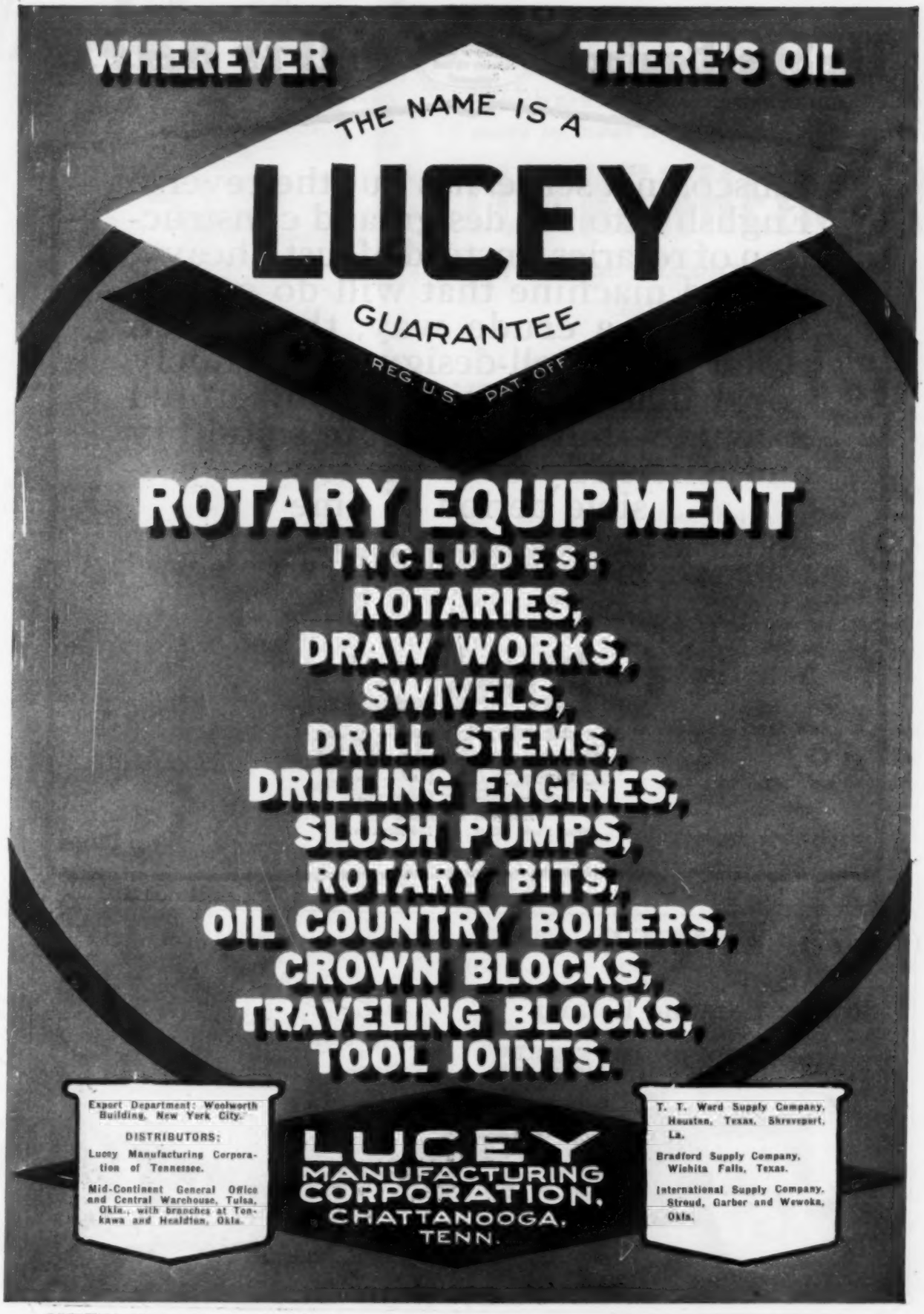
Carried in Stock and Sold By

GRINNELL COMPANY OF THE PACIFIC
Los Angeles San Francisco

NORVELLWIDER HARDWARE CO.
Houston Beaumont Shreveport

OIL WELL SUPPLY COMPANY
Oklahoma Kansas Colorado Wyoming

OIL WELL SUPPLY COMPANY
Pittsburgh New York Tampico London


WHEREVER THERE'S OIL
THE NAME IS A
LUCEY
GUARANTEE
REG. U.S. PAT. OFF.
ROTARY EQUIPMENT
INCLUDES:
ROTARIES,
DRAW WORKS,
SWIVELS,
DRILL STEMS,
DRILLING ENGINES,
SLUSH PUMPS,
ROTARY BITS,
OIL COUNTRY BOILERS,
CROWN BLOCKS,
TRAVELING BLOCKS,
TOOL JOINTS.
Export Department: Woolworth Building, New York City.
DISTRIBUTORS:
Lucey Manufacturing Corporation of Tennessee.
Mid-Continent General Office and Central Warehouse, Tulsa, Okla., with branches at Tonkawa and Healdton, Okla.
LUCEY MANUFACTURING CORPORATION, CHATTANOOGA, TENN.
T. T. Ward Supply Company, Houston, Texas, Shreveport, La.
Bradford Supply Company, Wichita Falls, Texas.
International Supply Company, Stroud, Garber and Wewoka, Okla.

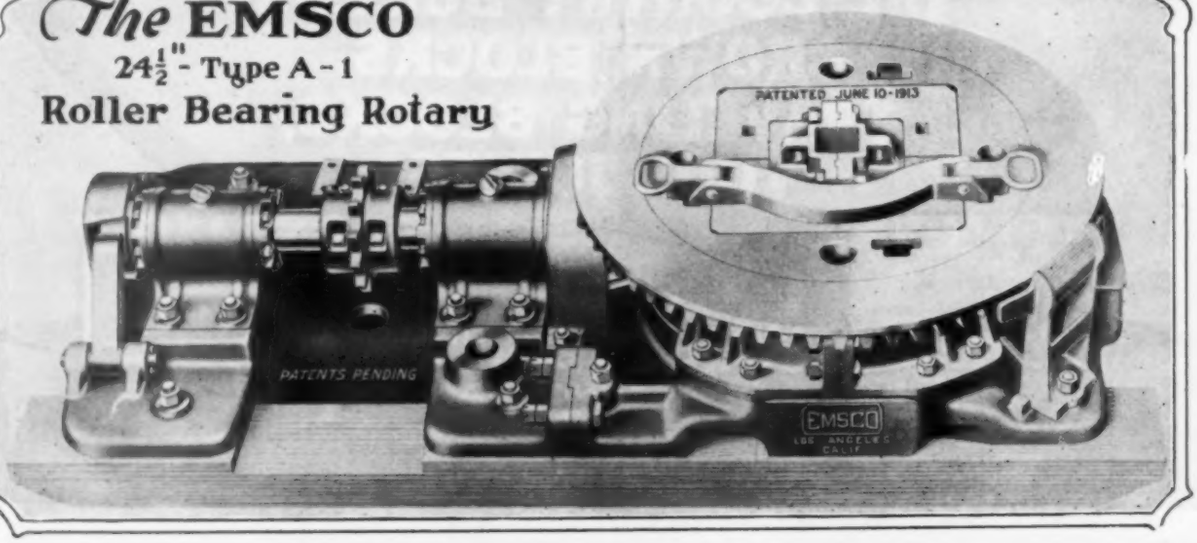
The Steel Equipped EMSCO A Complete Line of Better Oil Well Equipment Well is SAFE

Emsco, in a sense, has put the reverse English into the design and construction of rotaries. Instead of just a heavy, rugged machine that will do certain things in a crude way, the Emsco Rotary is a well-designed and finely constructed, precision-manufactured machine—built to operate smoothly and efficiently over the longest possible period of time

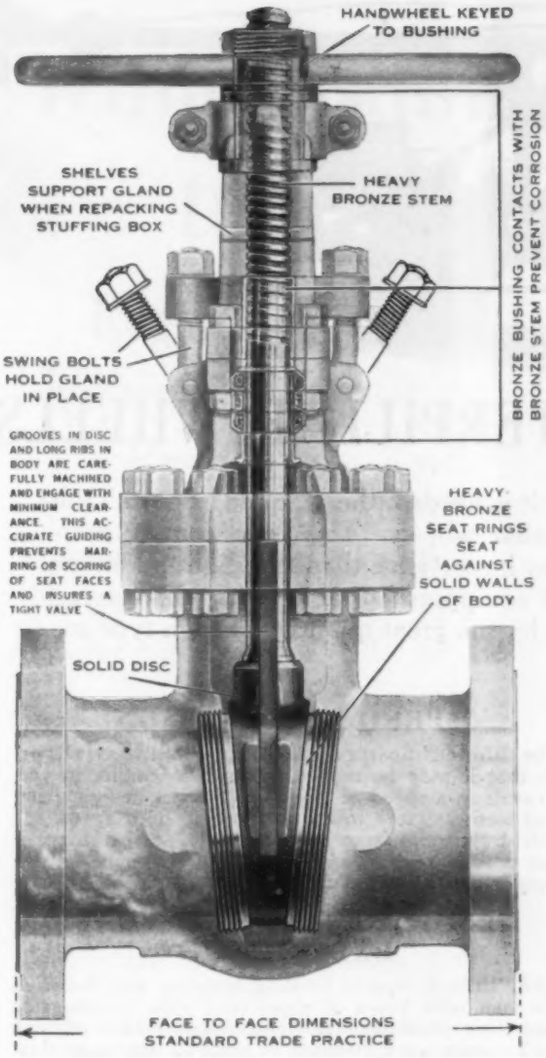
Emsco Rotaries have heavy duty Hyatt Roller Bearings; alloy steel cone rollers; hardened steel split sprockets; hardened steel drive bushing, and positive lubrication to all important operating parts.

EMSCO
Derrick & Equipment Company
Los Angeles ▼ ▼ California
Houston ▼ ▼ Texas
New York Office: 150 Broadway

The EMSCO
24½" - Type A-1
Roller Bearing Rotary



Inside Facts—


HANDWHEEL KEYED TO BUSHING
SHELVES SUPPORT GLAND WHEN REPACKING STUFFING BOX
HEAVY BRONZE STEM
BRONZE BUSHING CONTACTS WITH BRONZE STEM PREVENT CORROSION
SWING BOLTS HOLD GLAND IN PLACE
GROOVES IN DISC AND LONG RIBS IN BODY ARE CAREFULLY MACHINED AND ENGAGE WITH MINIMUM CLEARANCE. THIS ACCURATE GUIDING PREVENTS MARRING OR SCORING OF SEAT FACES AND INSURES A TIGHT VALVE
HEAVY BRONZE SEAT RINGS SEAT AGAINST SOLID WALLS OF BODY
SOLID DISC
FACE TO FACE DIMENSIONS STANDARD TRADE PRACTICE

LUNKENHEIMER
IRON BODY BRONZE MOUNTED GATE VALVE

Standard .....125 lb. W. S. P. 2 to 24 in.
Heavy .....175 lb. W. S. P. 2 to 16 in.
Extra Heavy...250 lb. W. S. P. 1½ to 18 in.

Also procurable in the Quick Operating Pattern, and in the All-Iron Pattern for handling solutions which attack bronze but not iron.

Which are influencing discerning valve users to insist upon the installation of

LUNKENHEIMER

Iron Body Bronze Mounted Gate Valves

The sectional view shows at a glance the simplicity of design, the rigid construction, and the careful attention to manufacturing details—all of which finally determine service results and ultimate valve costs.

Is it any wonder, then, that operating executives who have experienced endless trouble and expense trying to keep their gate valves tight, have enthusiastically accepted the Lunkenheimer design as a worth-while development in gate valve construction, and a solution of their gate valve problems?

Wherever Lunkenheimer Gate Valves have been installed, they are aiding materially in reducing operating costs, because they require very little attention after installation; they stay tight, and maintenance expense is held to a minimum.

Lunkenheimer manufacturing facilities insure a complete stock of all sizes at all times. Distributors are located in all industrial centers and can fill your requirements promptly from stock.

Complete information is contained in Gate Valve Book, F. 511, a copy of which will be sent upon request without any obligation on your part.

JUST FILL IN AND MAIL THE COUPON

AMERICA'S BEST LUNKENHEIMER QUALITY SINCE 1862

THE LUNKENHEIMER CO.
"QUALITY"
CINCINNATI, OHIO, U. S. A.
NEW YORK CHICAGO BOSTON LONDON
EXPORT DEPT. 129-135 LAFAYETTE ST., NEW YORK

THE LUNKENHEIMER CO. "QUALITY"

P. O. Box 876 Cincinnati, Ohio

Gentlemen—Send me without obligation, copy of Gate Valve Book No. 511. JK.

Name_____

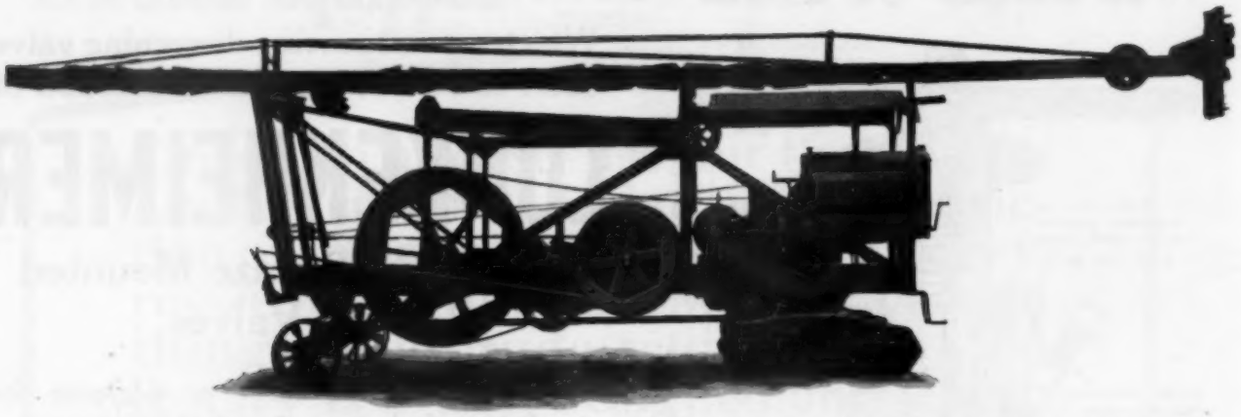
Firm_____

Position_____

Address_____

6-46-90

UNITED-SPARTA DRILLING MACHINE



—EQUIPPED WITH CATERPILLAR WHEELS

SO that it may go whenever and wherever it is needed, the "United" Sparta Drilling Machine can be equipped with caterpillar wheels. This is extremely desirable as this added advantage is of much greater importance than the slight additional expense such equipment entails. The value of equipping portable units with caterpillar wheels is generally accepted, as is shown by the great quantity of high type machines so equipped.

FOR DRILLING AND CLEANING

The "United" Sparta Drilling Machine has been designed to fulfill the requirements of the oil well drilling contractor and the producers. In its design has been incorporated all of the principles now accepted as best for spudding, drilling and cleaning out. Therefore, it may be truly called "the real drilling rig."

A REAL BULL, CALF, BAND WHEEL

One feature of the "United" Sparta is that it has a steel frame and a steel mast. Equipped with a real bull wheel, a real calf wheel and a real band wheel, too. These features will be easily recognized as of great value in the satisfactory operation of a drilling machine.

SPEED IN OPERATION

The "United" Sparta drilling rig is built tractor type, so that it may be moved by its own engine power. Travels at a speed of from 1 to 2 miles in low speed and from 2½ to 6 miles per hour in high speed. It will draw tools from hole up to 400 ft. per minute, has a sand reel speed of 750 ft. per minute—and a very rapid speed in cleaning out.

DESIGN RESULT OF 20 YEARS EXPERIENCE

The "United" Sparta Drilling Machine was designed by men with years of experience with drilling rigs and their problems. A tremendous amount of time and money were invested in tests to determine just what design was best. The result of this has been that in the "United" Sparta Drilling Machine you have a practical machine that is ideal for the purpose intended.

THE IDEAL OUTFIT FOR HARD SERVICE

We believe the "United" Sparta will attain the highest efficiency, the greatest economy and the extreme durability, that is possible to obtain in a drilling machine. We will welcome an opportunity of proving this to your entire satisfaction, without any obligation. Or, you can get some facts from the "United" Sparta Bulletin. So write for a copy today.

SEND FOR BULLETIN

UNITED IRON WORKS, Inc.

TULSA **Kansas City, Mo.** **DALLAS**

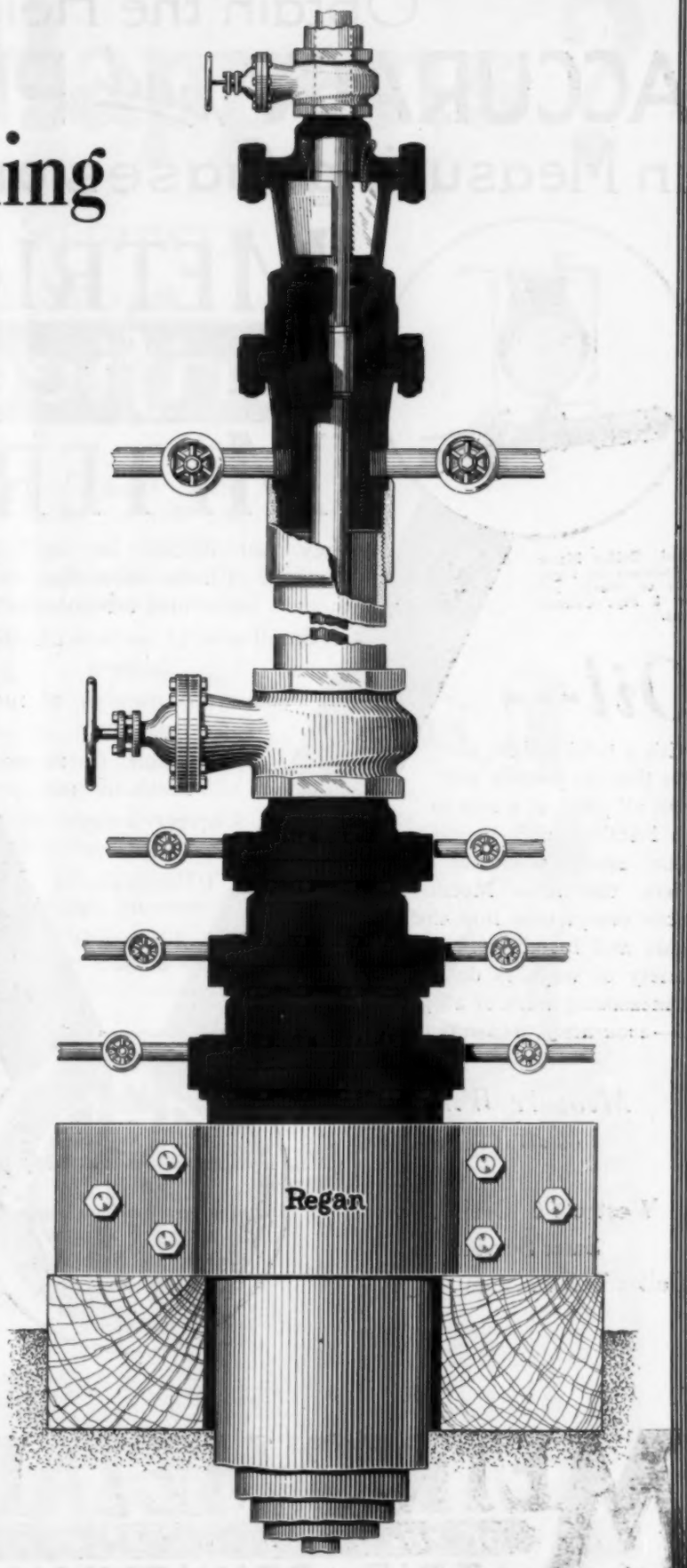
Control while running tubing

Regan-Trout Tubing Blowout Preventer

Tubing can be run through this head while the well is producing gas, or oil, or both — maintaining absolute control.

A device you can depend upon to eliminate the hazard of a blowout. It also prevents oil from splashing over the derrick floor.

The Tubing Blowout Preventer is here shown hooked up with a Regan Control Head with bottom flange and landing clamps. The Control Head can also be used with a wide base Regan Landing Flange to set on a concrete base or timbers, as desired.

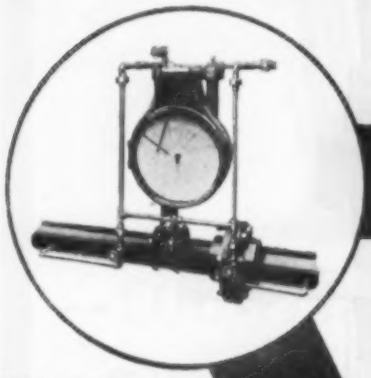


Regan
Forge & Engineering Co.
San Pedro California

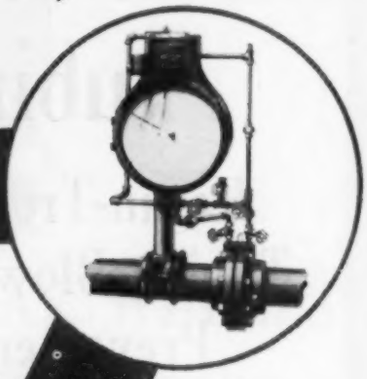
Houston, Texas - 1521 Post-Dispatch Bldg.
Tulsa, Okla. - 227 Mayo Bldg.
New York City - 75 West Street
Tampico, Mex. - J. W. Allen, Apdo 1064

Send for our new illustrated folder, showing the methods of using these efficient devices.

Obtain the Height of ACCURACY *and* PRECISION in Measuring Gases and Liquids with METRIC orifice METERS



Metric Orifice Meter Installation for Light Oils or Water, 2½ and 8 Pipe Connections.



Metric Orifice Meter Installation for Gas —Flange connections.

They put SURE in meaSUREment because of these unexcelled characteristics and advantages:

Small area of surface affected by friction

Minimum number of moving parts

Small angle of movement of pen

Correct length of lever arm

Uniform area of mercury pots

Large area of float

Oil---

With a total weight of less than 40 pounds and with all parts of a size to be installed and handled with small wrenches or pliers, this little Metric is taken everywhere into the oil fields and installed in a great variety of ways to do all types of measuring work of all grades of oil—*accurately, dependably.*

Gas---

These meters meet all demands in gas measurement from casing head to vacuum line,—from production to consumption and at every station in between,—with a precision in operation that approximates perfection. Throughout the range of service variations they give results that are ***extremely accurate.***

Measure With Metrics

Westcott & Greis, Inc.
Sales Service
Dallas TULSA Los Angeles

Metrics Mean MeaSUREment

Write for 1926 Edition of the Orifice Meter Bulletin

METRIC METAL WORKS

of the American Meter Company-Inc.

ERIE - PENNSYLVANIA - U-S-A

Say you saw it in The OIL WEEKLY

What Happens ?

—When Your Machinery Starts and Stops

Much of the wear and tear on machinery comes from starting and stopping. For then the fluid film of lubrication is broken, ***and unless you are using the right lubricant,*** friction takes a heavy toll.

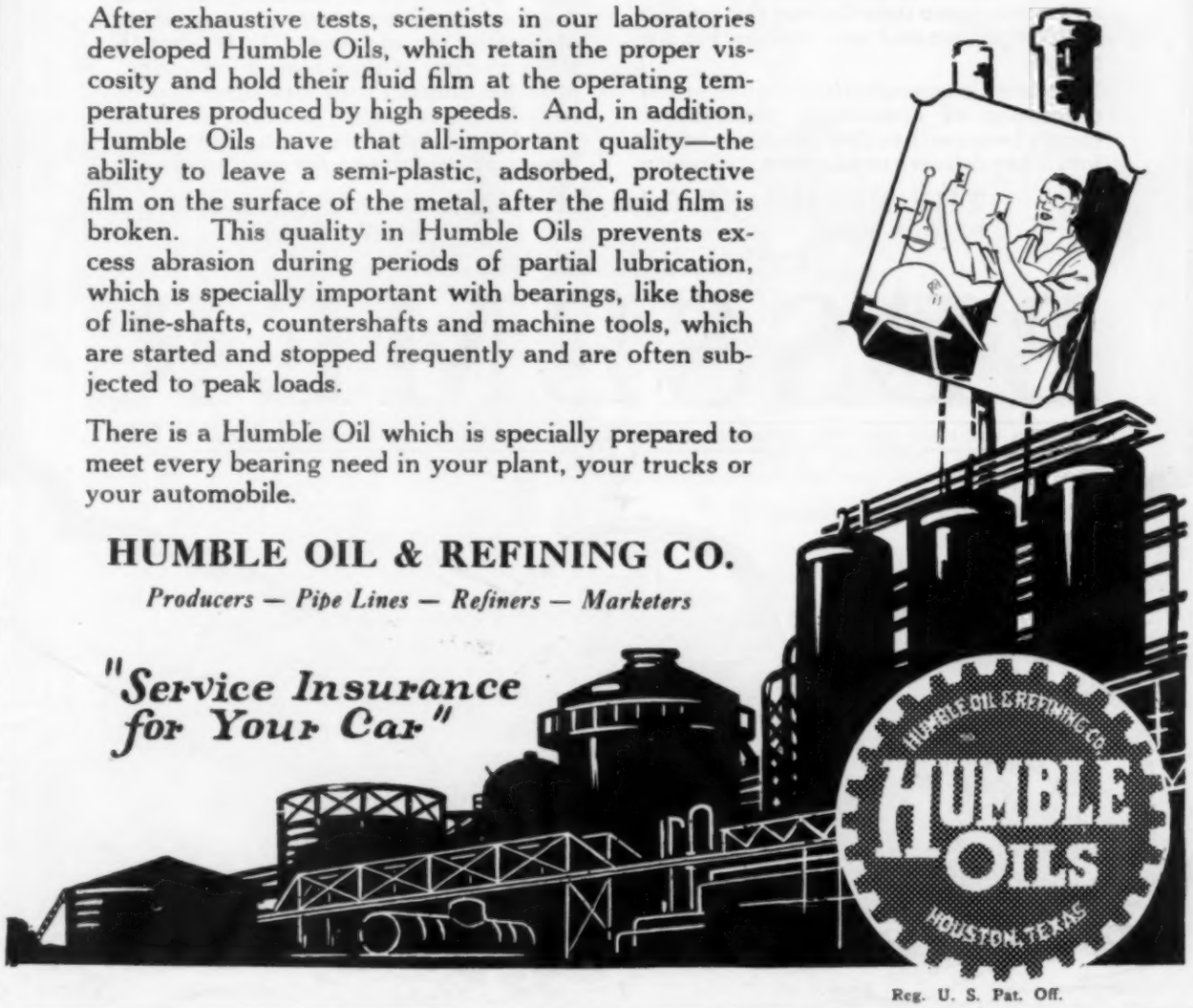
As long as the fluid film is intact, the quality of the lubricant is not so important—but when the fluid film breaks, as it does every time you start and stop a machine—the quality of the lubricant supplied to the bearings is of prime importance, if friction is to be kept from doing serious damage.

After exhaustive tests, scientists in our laboratories developed Humble Oils, which retain the proper viscosity and hold their fluid film at the operating temperatures produced by high speeds. And, in addition, Humble Oils have that all-important quality—the ability to leave a semi-plastic, adsorbed, protective film on the surface of the metal, after the fluid film is broken. This quality in Humble Oils prevents excess abrasion during periods of partial lubrication, which is specially important with bearings, like those of line-shafts, countershafts and machine tools, which are started and stopped frequently and are often subjected to peak loads.

There is a Humble Oil which is specially prepared to meet every bearing need in your plant, your trucks or your automobile.

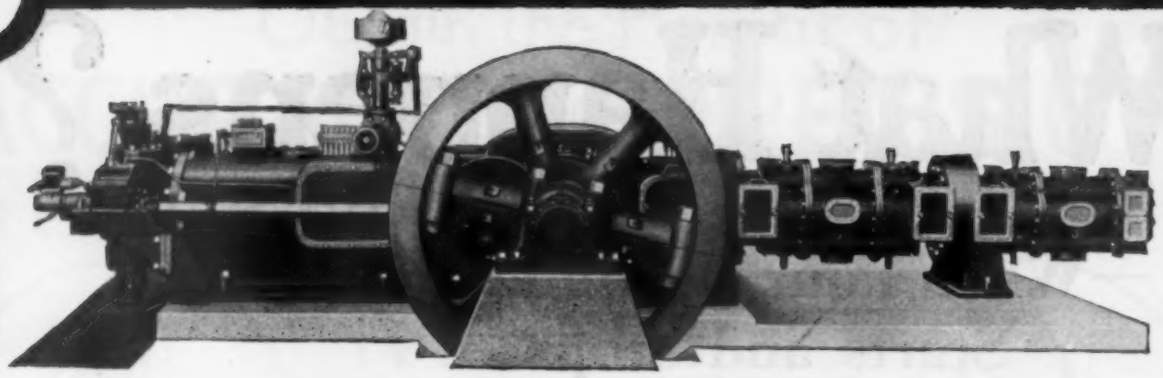
HUMBLE OIL & REFINING CO.

Producers — Pipe Lines — Refiners — Marketers



"Service Insurance for Your Car"

Reg. U. S. Pat. Off.



Bessemers Never Lie Down on the Job

BESSEMER Compressors should be judged by their performance on the job in order to appreciate fully their outstanding efficiency and long run economy. No matter how hard the work may be, or how long the hours, if it's a Bessemer Compressor it will handle it unfalteringly, and at the same time lighten the burden of the operator and save money for the owner.

Bessemer Compressors have built up their reputation of consistent performance simply because they don't lie down on the job. They deliver a steady stream of power from their power cylinders, and their compressor cylinders have a higher compression efficiency than any other cylinder built.

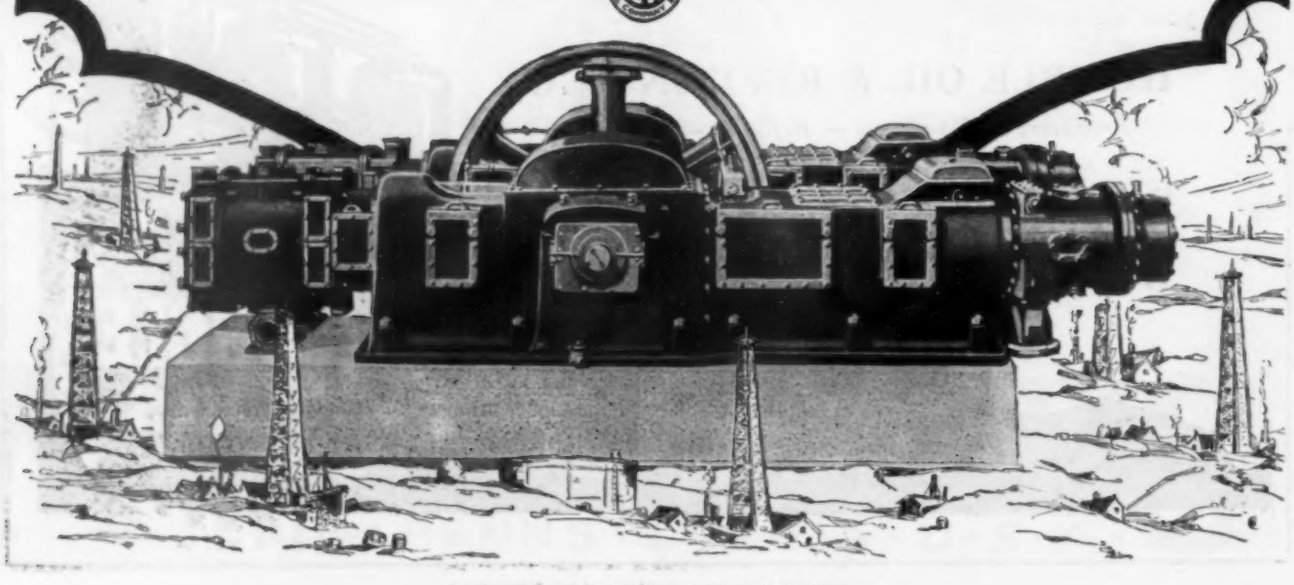
The actual operating efficiency of any Bessemer Compressor (two cycle or four cycle) is such as to welcome the most exacting comparative tests with any others of a similar size and type. The results of a close scrutiny of Bessemers in operation, plus the thousands of Bessemer service records will convince you that you need the dependability and economy of a Bessemer compressor for your work.

THE BESSEMER GAS ENGINE COMPANY
62 York Street ∴ ∴ Grove City Pa.

California Branch—727-728 Standard Oil Bldg., Los Angeles
California Distributor: Associated Supply Co., San Francisco—Los Angeles

BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS



Say you saw it in The OIL WEEKLY

All over the world
Axelson Pumps
are preferred!
FROM Smackover to Samarang—in every oil producing field of the World where pumps are used, Axelson Working Barrels are preferred.
Interchangeable Pumps
for
International Service
Address our Export Department for Descriptive Catalog
AXELSON PUMPS
(WORKING BARRELS)

AXELSON MACHINE COMPANY

P. O. Box 337, Los Angeles. Tulsa, St. Louis, New York City

Mid-Continent Distributors—Frick-Reid Supply Co. Eastern Distributors—Frick & Lindsay Co.

Say you saw it in The OIL WEEKLY

It's a Wilson

The Most Adaptable Tubing Tongs

Easy to handle
Fit different diameters

You'll get quicker action with a Wilson Tubing Tong. Each tong fits on the tubing as well as on the coupling without adjustment. There are two steps on the lug where the latch fits, making unnecessary any adjustment.

OPEN

Wilson 2-step Spring-latch Tubing Tongs

Each Wilson Tubing Tong takes tubing above and below its own size range. For instance a 2½" tong will take a 2" coupling, 2" upset coupling, 2½" tubing, 2½" tubing coupling and 3" tubing. To do this with other makes requires several tongs. So you see the big saving you can make by selecting a Wilson.

CLOSED

We'll be glad to send folders describing the various Wilson Tools.

Wilson Oil Tools Corp.

DISTRIBUTORS FOR

Wilson & Willard Mfg. Co.

Factory and Distributor's Office — It's a Wilson — 2301 East Vernon Ave.

Los Angeles, Calif.

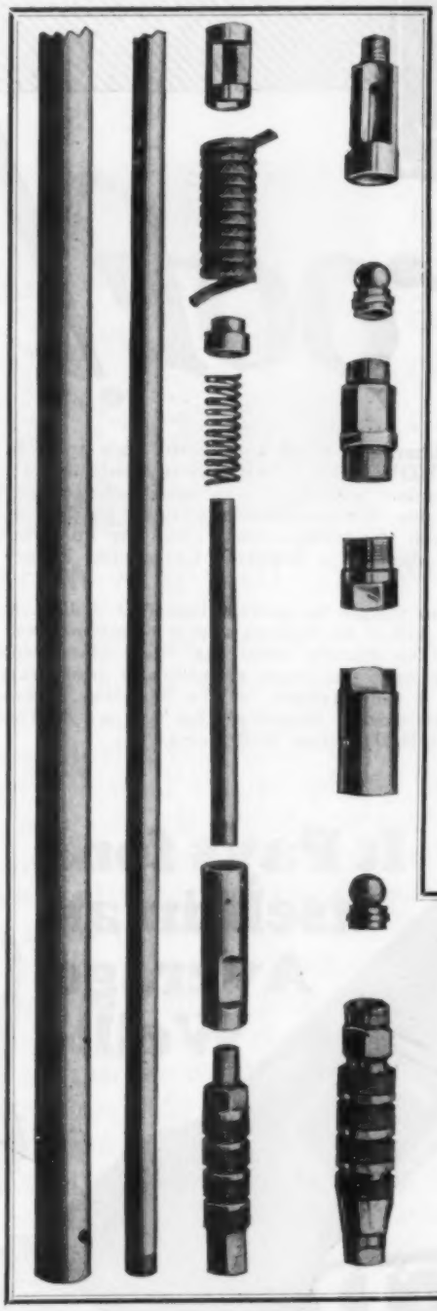
SALES OFFICES

TULSA, OKLA. 409 Atlas Life Bldg.

HOUSTON, TEXAS 530 West Bldg.

AMARILLO, TEXAS 1501 Polk St.

Satisfies Everybody



Hough Pumping Specialties are built to satisfy—and Repelex Balls and Seats and Duo Pumps are no exception—quality all the way through!

RE-PEL-EX

Here's a ball and seat that actually repels the corrosive action of acid and other strong elements—try one or a dozen.

The HOUGH DUO PUMP is a simple and sturdy two-purpose pump—used where excessive sand is present. Stands a lot of punishment—and delivers the oil.

HOUGH

Pronounced HUFF

THE CHARLES N. HOUGH MFG. CO.

Franklin, Penna.

W. Tarkington, Sales Representative,
1724 Ruth Street, Houston, Texas

C. O. Shumaker, 1143 S. Xanthus St.,
Tulsa, Okla.

Our products are sold through dealers—there is one in your town.

THE STANDARD COLLAPSIBLE ROTARY DRILL AND CORE BARREL

Fool Proof!

DRILLERS have deliberately tried to destroy this tool, in their efforts to see just HOW MUCH ABUSE it would stand. They have ground up boulders with it at high speed—they have "spudded in" without regard for the cutters—they have pushed it down through gumbo faster than the pumps could clear the hole—but they HAVEN'T been able to damage a Standard Collapsible Rotary Drill and Core Barrel.

It's so simple to operate that NO driller can possibly fail if he follows our few instructions. It is made so sturdily from the finest alloy-steels, and every part has been scientifically heat treated to give it the strength, or the hardness necessary in its particular capacity—that it is ACTUALLY STRONGER than drill stems.

—Have scientifically heat treated cutters always on the bottom —no resharpening.

—Change cutters by raising drill INSIDE the drill stem in 10 to 20 minutes.

—Take Cores THROUGH the drill stem in 30 to 60 minutes.

—SAVE 20 to 40% of the cost of drilling oil wells.

It Pays for Itself in an Average Well!

Write for Complete Information.

O. M. CARTER

206-7-8 SCANLAN BLDG. HOUSTON, TEX.

W. T. HILTPOLD — SALES AGENTS — T. P. HEWITT

45 "SEQUENCE CALLS" $82,500 WORTH OF BONDS

IN BRINGING out a new bond issue, a Cleveland financial house regularly files with the long distance operators from 50 to 100 sequence calls to banks and investment firms in other cities. The calls come in in one-two-three order. As one is finished another is put up, so that a greater number of calls can be completed within a given time. For one such issue, 47 calls were filed... 45 were completed. Charges, $40... sales, $82,500.

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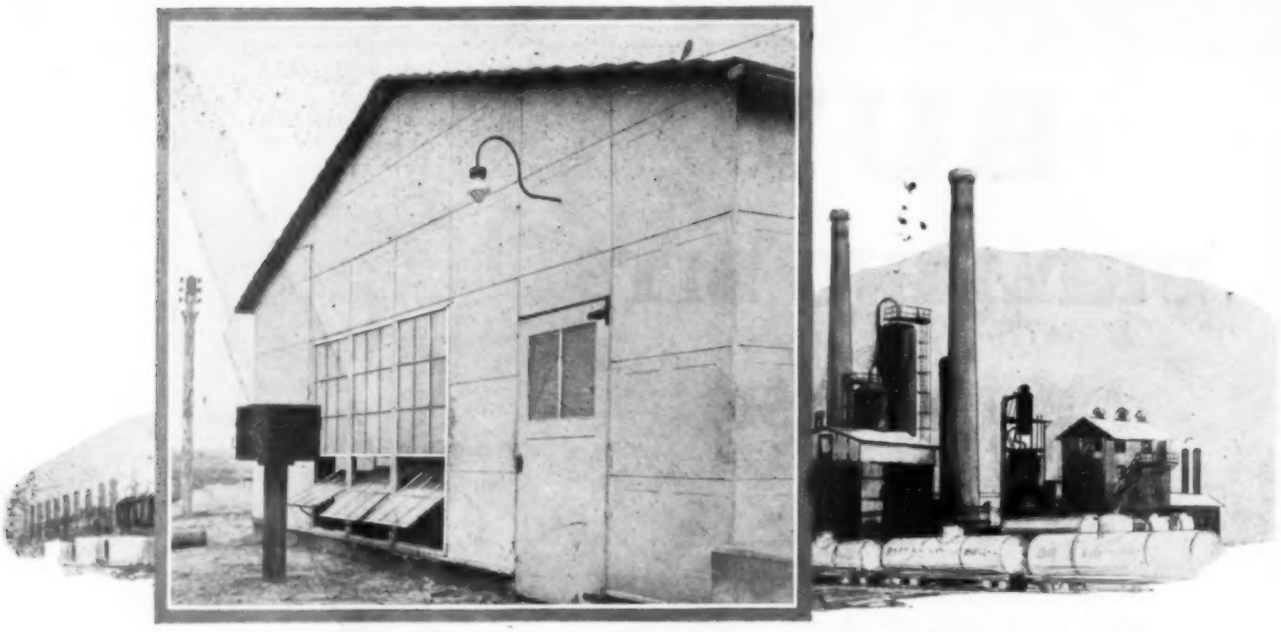

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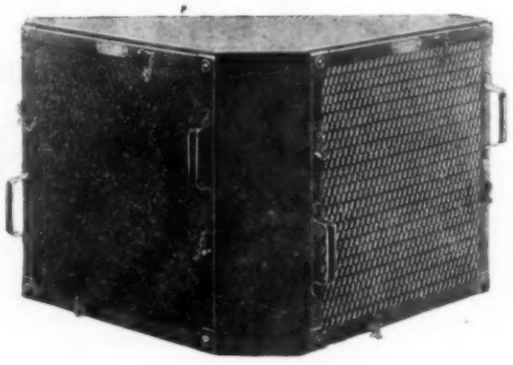

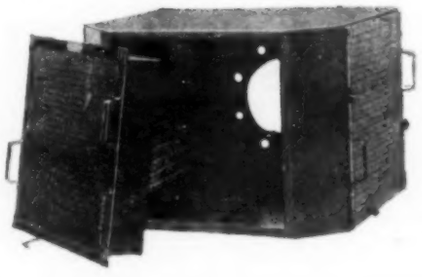

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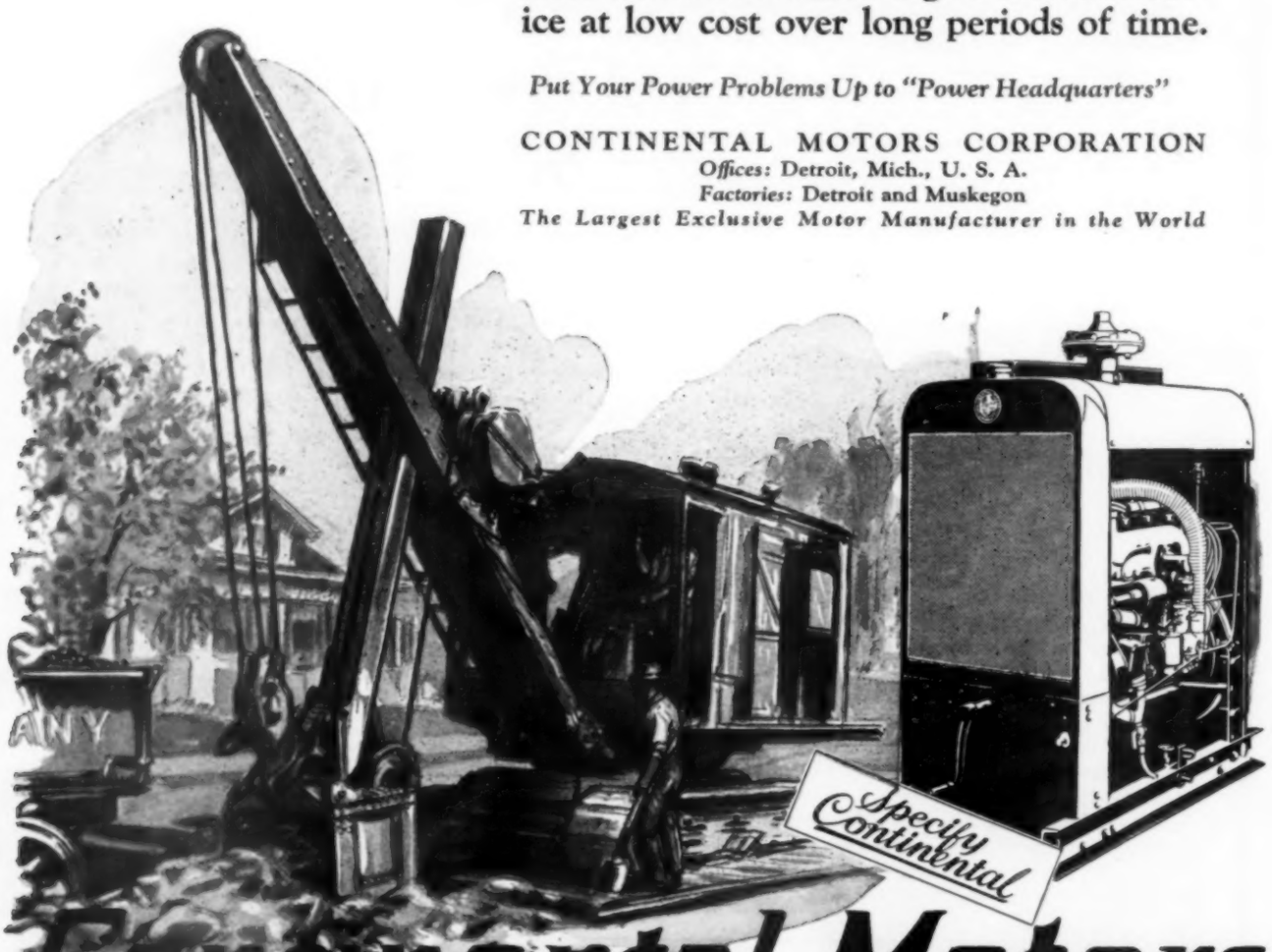

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Say you saw it in The OIL WEEKLY

Engineers Discuss Oil Recovery Problems At Successful Tulsa Meeting

Petroleum Division A. I. M. M. E. provides for additional branches in oil centers

Tulsa, Okla.—In attendance, interest and the type of subjects discussed, members of the Petroleum Division of the American Institute of Mining and Metallurgical Engineers closed their most successful session here Thursday, after two days of programs and two days of field trips.

Attendance at each session passed the 300 mark. Discussion on each subject was so extensive that some could not be heard for lack of time. The general subject for the whole meeting was increasing production from oil fields. Special attention was given to the Mid-Continent, although discussion brought to light many examples from Pennsylvania, California, the Texas Panhandle and the Gulf Coast.

John M. Lovejoy, who presided Tuesday morning in the absence of T. E. Swigart, recalled the fact that four years ago a meeting of the same body had been attended by not more than 15 men. He contrasted that with the attendance of 300 for this meeting as an example of the development of technical practices in oil production.

Topics Discussed

The general subject of the meeting was divided into three topics: Increasing Recovery in New Pools; Salavaging Oil in Developed Pools, and Improved Drilling and Production Methods.

The session in Tulsa was in conjunction with the annual meeting of the Mid-Continent Oil and Gas Association. The banquet of this organization Tuesday night was attended by the engineers and production men present for the program.

The Monday and Tuesday session were devoted to consideration of the technical program. Wednesday and Thursday were left for visits to Oklahoma oil fields, where methods discussed in the program are in field use. Wewoka, Tonkawa and the older fields around Nowata were to draw these field visits.

Provide More Branches

At a luncheon given Monday members of the institute brought up two points for discussion: Method of Nominating the officers and the possibility of establishing more branches with the idea of better serving the industry in the several sections of the country not now served by a local organization of the A. I. M. M. E.

It was decided at this meeting that a committee composed of seven to represent the various sections of the country should be selected by the chairman for the purpose of nominating the new officers of the Petroleum Division each year.

The chairman was also authorized to appoint a committee to investigate the need and possibility of additional branches of the Petroleum Division of the American Institute of Mining and Metallurgical Engineers, at Dallas, Houston, Shreveport and other oil country centers.

Technical Sessions

At the opening of the technical sessions Monday morning, presided over by F. Julius Fohs, chairman of the Petroleum Division of the institute, subjects dealing with increasing production from old fields were taken up. The use of gas and air lifts as well as gas and air drives and water flooding were topics of much discussion.

A paper of considerable interest on this subject was read by L. L. Brundred, with the National Supply Companies, on the theory of normal production and the theory and methods of introduction of gas and air for increasing recovery.

Gas lift flowing of wells in the Mid-Continent district was discussed by S. F. Shaw, Roxana Petroleum Corporation, and was followed by a lengthy discussion by Hollis Porter of the Gypsy Oil Company; H. K. Hutchcraft, Clark Brothers Engine Company, and R. P. McLaughlin.

Proceedings Monday afternoon began with a welcome from Harry H. Smith, secretary of teh Mid-Continent Oil and Gas Association. He volunteered the help of his organization in promoting the work of the engineering profession within the petroleum industry.

C. V. Millikan of the Amerada Petroleum Corporation, spoke on gas oil ratios as related to decline of oil production. His data showed that the decline in oil output is accompanied by an increase in the amount of gas coming with each barrel of oil.

Dr. W. A. J. M. van Waterschoot van der Gracht of the Marland Oil Company, in discussing this subject called attention to the fact that the character of gas should be studied in applying gas either to lift or drive oil to aid production.

J. R. McWilliams of the Skelly Oil Company made the point that the flow of

The A. I. M. M. E. Progress and Oil Papers

THE meeting of the Petroleum division of the American Institute of Mining and Metallurgical Engineers in Tulsa this week marks another milestone in engineering progress by the oil industry.

Each year has seen new problems arise in drilling and the handling of oil production. Of late these problems, due to deeper drilling and the more efficient handling of production, have become more frequent.

It is to the engineers within the industry, therefore, that the oil business, and the public served by the oil business, must look.

That they are performing their task with ever increasing efficiency is demonstrated by engineering accomplishments within the petroleum industry, and by the reports and discussions which came out at the Tulsa meeting.

Oil journals, as well as the engineers, have a distinct obligation to the industry they serve. Theirs is the duty of transmitting to the people within the industry, the "hows and wherefores" of engineering accomplishments.

We accepted the challenge which our industry laid down to us, several years ago. For a number of years ours has been a task of building an editorial staff to back up an editorial policy which has meant more than simply reporting new wells, new fields, and statistics.

Today, we have gathered a large editorial staff of men who are not only earnestly striving to advise the more than 10,000 oil producers who subscribe to our journal, as to what is going on in engineering development, but, we are glad to say, we have gathered a staff of men, who by university training and practical work, have demonstrated their fitness for the duty in which they are engaged.

Just as *The OIL WEEKLY* stands for "first in point of oil producer circulation in the United States," is also stands as first to appreciate the desire of the industry for information on how and why things are being done in a newer and better way.

oil through a sand is turbulent rather than viscous, a factor which should be considered in applying gas to stimulate production.

The discussion of Harry Edwards of the Humble Oil & Refining Company was read by John R. Suman, who also discussed methods used in the Gulf Coast.

Advantages of Unit Operation

Others heard were J. O. Lewis of Dunn and Lewis, H. C. O. Clark of the Pure Oil Company, and A. W. Peake of the Midwest Refining Company.

J. O. Lewis next read his paper on the advantages of unit operation in oil fields. He treated the subject purely from engineering and economic standpoints. His conclusions were that unit operation would be advantageous on these scores.

He made the point that unit operation always would have operating advantages, although advantages might vary. The advantages he classed as lower development costs, economic spacing of wells, order development instead of competitive developments but added that so little is known of all methods of taking advantages of unit operation that it is almost premature to consider it.

He outlined a plan of unit development of a new field, after a well has been completed. First wells should be drilled to determine the extent of the structure, which would determine the producing area. Where a field is small, drilling should progress from location to location. These recommendations were similar to those made by the author to the Federal Oil Conservation Board.

F. W. DeWolf, geologist of the Humphreys Corporation of Houston, in discussing unit operation said he considered it possible only through voluntary action, due to existing property laws and vested rights.

Phillip Kates, attorney of Tulsa, brought up the possibility of phases of unit development being invoked through the police power of the States. His plea was that attorneys work with engineers so legislation on the subject of unit development might progress with technical knowledge.

James H. Gardner of the Gardner Petroleum Company called attention to two instances in Oklahoma where lease holders have pooled their holdings for the drilling of wildcat wells.

Salvaging Oil

The session Tuesday morning with a classification of salvaging oil in developed pools, opened with a paper by E. O. Bennett of the Marland Oil Company, on methods of operation in the Texas Panhandle. Previously a paper on the increasing of recovery and its economic effects, prepared by H. C. O. Clark of the Pure Oil Company was read by F. W. DeWolf of the Humphreys Corporation.

Burt H. Collins of the Echo Oil Company told briefly of successful methods of using air, gas and water flooding for increasing oil recoverey.

The Elliott Pool of Nowata County was selected by A. A. Beard of the Tidal Oil Company as the subject for the application of air under the Marietta method. The Tidal and Prairie companies have a number of adjoining leases there operated as a unit so far as the application of air for restoring pressure is concerned.

The air plant was started in June, 1924. Well output began to increase in August of that year and increased continuously through 1925 until production of the property reached a gain of four hundred per cent.

At the time of introducing air the properties had 82 wells with average well production of .53 barrels per day. Here is the conclusion drawn by J. E. Roth, who read the paper:

"We can reasonably expect to produce about three per cent of the original pool content in place of the nine tenths of one per cent to be expected from regular production during the next ten years."

This paper dealt with labor costs, installation costs and the effect of air application on natural gasoline from gas of the area.

Other papers dealing with the different phases of salvaging oil from old fields were presented by Ben E. Lindsly of the Bureau of Minec; Dr. W. T. Thom, Jr., U. S. Geological Survey; C. H. M. Roberts, Wm. S. Barnickel Company, and Stanley C. Herold, Stanford University.

Drilling and Production

The Tuesday afternoon session was presided over by Alf G. Heggem and was devoted largely to discussion of improved drilling and production methods. Of particular interest at this session was the paper read by H. B. Hill on the Powell field.

In summarizing the engineering report just completed by the Bureau of Mines on the Powell fiield, H. B. Hill, supervising engineer at the Dallas branch of the Bureau, and Chase E. Sutton, petroleum engineer for the Bureau of Mines, pointed out to the institute the extent of research that ha sbeen undertaken in this area and gave a number of valuable facts on what operators are doing to meet development problems there.

As would be expected this discussion was concentrated on the methods being used to overcome or minimize the water problem, which as is the case in a number of fields, has made exploitation at Powell as well as other Balcones Fault fields particularly difficult.

In this connection, Mr. Hill and Mr. Sutton reviewed early plugging at Powell and gave a complete history of work accomplished beginning early in 1924 down to the present time. Although it was pointed out that in early plugging results were in many cases unsatisfactory, that through the development of this practice operators in these fields have been able to materially increase the recovery of oil from their properties.

Plugging at Powell

In commenting on their study of the results of plugging on the Hill and Wollens tracts at Powell, Messrs. Hill and Sutton said:

"At first the operators in this locality resorted to compressors to force or maintain their production. The net result of this abnormal production practice was to greatly increase the water production along with a nominal increase of oil. In July, 1924, it became apparent that the water was gaining rapidly and production costs were at a point where operating by this method was no longer profitable.

"The fact that the water level in this area stood at about 2000 feet above the sand, whereas in other parts of the field the level was between 300 and 500 feet, indicated that a new and lower water source had been tapped.

"The increase in production following repair work on eight wells in the big pay area is estimated at 827,700 barrels."

Another type of repair work or plugging was found by the authors in their study of results obtained from plugging on the Magnolia's I. T. Kent tract 1.

"This lease is favorably located in the central part of the field between the 2460 and the 2520 foot contour lines. The repair consisted in plugging off edge water in the bottom of the sand. The first plugging work attempted was completed in March, 1925. The results indicated that the production could be increased by continued plugging operation on other wells. During the balance of 1925, eight wells were cemented by this company, and to May, 1926, three additional wells have been cemented.

"As a result of cementing the daily lease production was increased from 719 barrels in June, 1925, to a maximum of 1540 barrels in August, 1925.

"The daily production as of April 1, 1925, for the average well previous to cementing was 56 barrels of oil and 67 water. These figures are given to indicate the production of the lease at the time plugging was commenced.

"The results of plugging operation on this leas eare verey interesting when it is realized that of the 16 jobs completed, 15 of them have been by the dump bailer method with the liner not removed.

"The plugging operations from June, 1925, to April, 1926, resulted in an estimated net increase of 112,000 barrels."

A third lease was chosen by the authors, The Texas Company's Fleming lease, to show the result obtained by cementing off the bottom water on an edge lease situated between 2480 and 2540 foot contour lines. The lowest contour (2540) is only 40 feet above the 2580 foot contour line, which approximately established the production limit of the field.

"Since may, 1924, The Texas Company has cemented nine of the 12 wells on the tract, several of them two or three times. An analysis of the production figures indicates that they have been well repaid for their work in increased production alone, without considering the reduction of water.

"The estimated net increase in production due to plugging on this lease was

Development and Operations in the Panhandle Field*

By E. J. McKEE
Bartlesville, Oklahoma

THE area discussed lies south of Canadian River in Hutchinson County, Texas, covering approximately 10 miles east and west and four miles north and south.

Development is carried on in the manner usual in standard tool operations. No outstanding divergence from the usual methods is necessary as wells are completed in 35 to 55 days to approximately 3000 feet. Most of the time is lost in the upper part of the hole and is usually caused in driving pipe of larger sirzes. After approximately 1500 feet, little trouble occurs. A comparison of 13 contractors drilling for Phillips Petroleum Company gave the following averages: Drilling time from 32 to 63 days with a daily footage of from 49 to 87 feet per day. The rigs furnished are National turnbuckle type with six-inch irons and steel wheels.

*Paper read before A. I. M. M. E. meeting, Tulsa, October, 1926. Copyright, 1926, by the American Institute of Mining and Metallurgical Engineers, Inc.

Casing Used

The casing used in our No. 6 Coble, Section 13, Block Y. M. & C. Survey, Hutchinson County, is a fair example of average casing needs:

Size of Cas., In.		Depth of Well, Ft.	In.
20	90	20	5
15	70	460	
12½	50	684	
8¼	28	2239	
6⅝	24	2288	

Formation Record

Formation—	Formation Thickness Feet	Depth Well Feet
Sand light soft	30	30
Red rock red soft	100	130
Sand light soft	15	145
Red rock red soft	55	200
Sand broken light soft	10	210
Red rock red soft	200	410
Sand water light soft HFE	5	415
Red rock red soft 15½	180	595
Quick sand red soft	30	625
Gyp light soft 12½ at 675	65	690
Shale blue soft	10	700
Salt light soft 2 BW 720	20	720
Sand broken light soft	10	730
Lime broken light soft	70	800
Salt light soft	115	915
Red rock red soft	770	1785
Slate light soft	135	1920
Shale blue soft cave 1880	10	1930
Salt light soft	55	1985
Lime light hard	15	2000
Shale blue soft	5	2005
Red rock red soft	80	2085
Shale blue soft	70	2155
Red rock soft 8¼ 2204	45	2200
Lime broken light hard	130	2334
Shale blue soft	26	2360
Lime light hard	115	2475
Lime dark hard	125	2600
Lime light hard	25	2625
Lime broken dark hard gas 2775	150	2775
Lime broken brown hard 6⅝ at 2882	107	2882
Lime light hard first oil 2920	38	2920
Sand light soft	7	2927
Lime light soft	5	2932
Lime	32	2964
Total Depth		2964

Wherever possible all large pipe is pulled after cementing either the 15½-inch of 12½-inch casing. In this particular well the 15½-inch parted after 460 feet had been run. Shifting sands encountered at 210 feet caused the parting, necessitating running 12½-inch at 490 feet, 12½-inch being driven to a total depth of 675 feet, where it was cemented with 50 sacks of cement and 10 gallons of Konset, leaving 10 feet of cement in the casing and was allowed to stand for 72 hours, thus making a complete shut-off. In this particular hole it was not necessary to run 10-inch casing to shut off dry cavings. Caving encountered at 1880 feet caused some trouble but the driller was able to overcome it and carry the 12½-inch hole to top of the lime, which was reached at 2200 feet, where 8¼-inch pipe was set. This 8¼-inch hole was carried until 2882 feet where 6⅝-inch pipe was set and cemented with 50 sacks of cement and 15 gallons of Konset; this cementing not being done until after the first slight trace of oil had showed up, thereby shutting off with the cement all of the upper gas which is contaminated to a more or less etxent by hydrogen sulfide. A consensus of opinion in our organization is that the tremendous volumes of gas encountered above the oil in the Panhandle field is directly connected somewhere within the area to the oil zone, as the rock pressure on the dry-gas zone is the same as that of the oil zone, and the fluid height of the oil when it comes at rest is about equivalent in weight to the rock pressure on both zones. Therefore, should this be the case, cementing the upper gas, conserving its volume and pressure and supplying its natural pressure on the oil zone, would ntend to help migration, thereby giving a greater recovery per acre.

Pumping Equipment

From Figure 1 apparently operators in this field have encountered many obstacles that have not heretofore had to be considered in large operations, which necessitated an individual operation unit for each well. The following is a standard type of pumping unit (Fig. 2) used in our Panhandle operations for pumping wells on beam using a clutch connected direct to the engine:

82-inch National turnbuckle derrick complete with 8-foot steel wheels, 6-inch irons, corrugated steel belthouse, 16 by 16 sectional steel engine house, cement floor, 35-hp. Bessemer gas engine with circulating pump and reversible clutch, two-inch upset tubing. ⅝-inch Axelson rods.

Tankage

The vapor-proof type of tanks in use in Panhandle are either Mount-Cooper 10 by 5 feet riveted steel tanks (Figs. 3 and 4)or Perfection 15 by 8 foot bolted steel tank (Figs. 5 and 6), all equipped with approximately 100 feet of two-inch wrought-iron steam coils. Storage tanks are 55,000 barrels steel with steel roof supports and electric welded steel roofs, equipped with 2400 feet of two-inch wrought-iron pipe steam coils.

Production Methods

A few of the wells in this area do make their production by natural flow but in most of them some artificial means,

83,000 barrels. This figure is based on estimated and actual oil gages for the individual wells from December 31, 1923 to April 1, 1926, which figures checked the pipe line runs within five per cent. The increased production for the wells plugged is estimated for the period from cementing to April 1, 1926."

A chart accompanying the discussion of The Texas' Fleming lease at Powell, graphically shows the value of plugging on this lease. Nine wells on this tract that were plugged back had a daily production of 45 barrel at the time of plugging and at the end of 18 months had declined only to 27 barrels, whereas three wells on this tract that were not plugged back had declined in the same period from a daily production of 40 barrels to less than 10 barrels.

In summing up their comments of the practice of plugging Mr. Hill and Mr. Sutton stated:

"Generally a rapid decline in oil production immediately follows the appearance of water in large amounts and particularly when such water has free access to the well. This would indicate that the quantity of water produced was limited only by the capacity of the equipment, whereas after plugging, although the actual quantity produced in many cases is still large, the working head is reduced sufficiently to allow more oil to enter the well."

Mr. Hill and Mr. Sutton place the probable ultimate recovery of the Powell field at 198,759,000 barrels.

Other papers given at this session by J. R. McWilliams, Skelley Oil Company; E. J. McKee, Phillips Petroleum Company, and Max Bauer, Midwest Exploration Company.

either swabbing or pumping on the beam, must be used. On two of our wells on which we have taken the load in pounds, we find the following conditions: No. 7 Coble producing 200 barrels with two-inch upset tubing and ⅝-inch rods, no water or paraffin, showing a lift of 12,000 pounds. No. 8 Coble with the same equipment and the same amount of production, but production being two per cent water and three per cent paraffin and B.S., showed a lift of 15,500 pounds.

In pumping operations we have a great deal of trouble from paraffin, which necessitates pulling rods every two or three days to remove accumulations. By pulling rods before much can be deposited, we avoid more tubing jobs. In a few wells where rods were not pulled for ten days or two weeks, tubing and rods had to be pulled together and the tubing steamed to remove the deposits of paraffin. After a few wells have been pumped for some time, the time limit on pulling rods to remove paraffin increases. One such well went as long as three weeks before rods were pulled, and then showed only a small deposit. For two weeks after it was first put on the pump, rods had to be pulled every two days and the tubing every six days to remove the accumulated paraffin.

1. Character of Crude

Most Panhandle crude has a straight paraffin base and the deposition of this paraffin in the casing, tubing and rods causes unnecessary pulling and much trouble to swabbing wells in the excessive load on the swab. The characteristics of this wax are as follows:

Gravity, ° B.....12.5
Melting point, ° F 140
Initial boiling point, ° F.....230
Water, per cent 3

It contains suspended sand, shale and sulphur, but consists chiefly of pure paraffin wax. Upon heating to distill, it gives off hydrogen sulfide. Concentrated sulphuric acid has little action on the wax even when heated. All of the waxes encountered are to a great extent chemically inert and to date we have been unable to find any chemical that will react with them. The only thing that has any apparent effect, is heat. Whenever chemicals were used and the wax dissolved any, the effect was due to the heat of reaction with the substance used and the water contained in the paraffin, not to the effect of the chemical on the wax.

The temperature of the oil coming from the wells is sometimes as low as 58 degrees F. To date we have been unable to get any reliable data as to the sand temperatures, but from close observance of the tubing, paraffin begins to deposit about 700 feet from the surface and is probably due to refrigeration caused by the expansion of gases at this point. In the transportation of the crude from the well to the receiving and storage tanks, all lines must be insulated in some way to protect them from low atmospheric temperature in the Panhandle during the winter months. What the insulation will be has been a source of much discussion and of research for something that is effective as well as economical. In our operations, we expect to bury all lines with a covering of at least 32 inches of earth, the line to be laid on blocks in the ditch and parallel with a 1-inch steam line for applying heat if needed. This heat will be supplied from a 35 h. p. mounted boiler, to be moved where needed and to be a part of each lease equipment.

By reference to topographic surveys we have tried to place all flow and receiving tanks with enough grade of fall so that lines will clean themselves by gravity.

Effect of Heating on Congealing Temperatures of Crude Oils

Eight samples of Texas crudes were examined to study the effect of heating on the congealing points. The viscosities and pour points were determined (Table 1) and used to get some mental picture of the molecular aggregations in these crude oils. Heating to 190 degrees F. seems to break up these molecular aggregations, or to depolymerize the higher paraffins, and consequently the crude oil becomes more limip and has a lower congealing point. But the crude oil on standing several days at room temperature, tends to go back to the original state, approaching its original the viscosity and pour points. The speed of this repolymerization varies with different crudes depending on the constitutents.

In a few oils apparently the viscosity decreases which is due to the settling out of small amounts of asphaltic material. This material is strained out in pouring into the Engler viscosimeter. The congealing points and pour points tend to become the same as that of the original crude.

Effect of Heating on Viscosities of Crude Oils

Fig. 7 shows the effect of heating a crude petroleum (Weatherly No. 1) at temperatures of 130, 160 and 190 degrees F., recording the changed viscosities at different time intervals.

The original viscosity of the crude was 99 Saybolt seconds. The viscosity of sample No. 1, heated under a reflux condenser to an oil temperature of 130 degrees F., was 62 Sayboldt seconds, or a decrease of 37. In other words, the fluidity was increased about 36 per cent. The other samples, 3 and 4, were determined after standing 2 hours and would in all probability show the same viscosity as No. 2. The viscosities determined after the oils had stood show a gradual increase. After 20 hours in the ice box, the viscosity is still lower than that of the original sample of crude (Saybolt seconds) but upon longer standing this would undoubtedly reach that of the original crude oil.

The explanation of this phenomenon is probably due to the depolymerization of the higher hydrocarbons to form simple molecules when heated. It is not cracking, because on standing the paraffin hydrocarbons polymerize again and thus return to the same viscosity as the original crude.

Perhaps neither the pour point nor the viscosity at various temperature, as ordinarily determined, tell us what we are after in getting the congealing temperature of the oil. The time element is not taken into consideration. Rapid cooling,

Table 1—Data on the Effect of Heating Eight Samples of Texas Crudes

		Gravity B.	Viscosity, Saybolt, Sec.	Congealing Point, ° F	Pour Point °F.
1.	J. H. Middleton, No. 1 Weatherly				
	Original crude	38.6	283	70	62
	Heated to 190° F	38.2	115	50°(?)	40
	Heated sample after 24 hours		125		50
	Heatde sample after 8 days		156	70	60
2.	J. R. Phillips, No. 00 Weatherly.				
	Original crude	27.5	232		82
	Heated to 190° F	27.2	206		80
	Heated sample after 8 days		220		80
3.	J. R. Phillips-Currie No. 1 Smith.				
	Original crude	39.8	124	60°(?)	58
	Heated to 190° F	39.3	103		Below 20
	Heated sample after 8 days	39.2	118	65	60
4.	Luckey Ten Oil Co., No. 1 Smith.				
	Original crude	39.3	115	About 55	45
	Heated to 190° F	39.2	95	About 50	38
	Heated sample after 8 days	39.2	113	55°(?)	45
5.	McIlroy Oil Co., No. 2 Smith Capers,				
	Original sample	35.5	475	About 65	58
	Heated to 190° F	35.3	185		Below 20
	Heated sample after 6 days	35.4	430		60
6.	McIlroy Oil Co., Nos. 1 and 3 Smith-Capers.				
	Original crude	36.5	1800	(approx.) 00	70
	Heated to 190° F	36.4	171	(approx.) 40	32
	Heated sample after 3 days	36.4	324	(approx.) 65	58
7.	Phillips Petroleum Co., Block 62, No. 2.				
	Original crude	35.4	677	82	78
	Heated to 190° F	35.5	297	54	45
	Heated sample after 4 days	35.2	290	60	55
8.	Phillips Petroleum Co., Block 62, No. 1.				
	Original crdue	37.8	358	78	72
	Heated to 190° F	37.6	121	35	26
	Heated sample after 4 days	37.6	210		45

Drilling at Seminole City Has Not Outlined Producing Area

Indicated that first Wilcox well is located on top of the structure

By GRADY TRIPLETT
Staff Representative

Tulsa, Okla.—Another Wilcox sand pool evidently has been uncovered in the Seminole area of Oklahoma with the completion of F. J. Searight's No. 3 Youngblood in the northwest of the northeast of the southeast of section 33-10-6. This well is in the district heretofore producing from the Hunton lime and from shallower sands. But it is the first Wilcox sand well in the general area.

The well picked up the Wilcox at 4310 feet and at 78 in oil gas was found. It is thought to have drilled only a foot in the Wilcox, where the flow began. So far a 24 hour gauge has not been taken but the well is flowing around 300 barrels an hour.

The Searight well is north of the Seminole City field proper and is not considered as being on the same structure with Seminole City. This, however, is not certain and will not be known definitely until further drilling has been done.

The Searight area was the first Seminole County field to be developed. But shallower sands were drilled first and the field has been of scant importance, so far as high production is concerned. But the finding of Wilcox production changes the whole complexion of the district as a producer of crude oil.

In the Seminole City field proper the Independent Garland interests have their fourth well and the tenth Wilcox sand well for the field. It is Fixico No. 4, which is making 200 barrels an hour. The exact depth has not been taken but is given as the top of the sand at 4133 feet and bottom of the hole two feet deeper. It will perhaps be drilled still deeper.

Not enough wells have been completed in the Seminole City pool for determining the extent of production in the Wilcox sand. Neither can the structure be outlined from the limited drilling that has reached either the Hunton lime or the Wilcox sand.

But the limited information available indicates that the first Wilcox sand well of the area, No. 1 Fixico of the Independent Oil & Gas Company and the Garland Petroleum Company in the Southwest corner of the northeast quarter of section 26-9-6, is near the top of the structure.

It topped the Wilcox at 4,055 feet, shallower than another well has found it. This is calculated from the surface. Calculated by sea level elevation, the variations of the surface figures would be changed. But engineers studying the field are of the opinion that the high point for the Wilcox will be close to the first well.

The well finding the Wilcox deepest is No. 1 Rentie of the Mid-Continent Petroleum Corporation in the southeast corner of section 149-6. The Wilcox was topped in this well 4188 feet below the surface. This well was completed October 4 for 2000 barrels initial output. It extended production a half mile to the northwest.

The Independent-Garland interests now have three producing wells on their quarter section, the northeast of 26-9-6. All three have found the Wilcox shallower from surface than other wells of the pool. Number two in the southeast corner of the southwest of the northeast topped this formation at 4101 feet and was drilled four feet deeper. Number three in the northeast corner of the southwest of the northeast found the top of the Wilcox at 4,077 feet, just 22 feet lower than number one. These are calculations from the surface.

The first well to find the Wilcox dry in what is considered the big play is Number 8 Reed of the Indian Territory Illuminating Oil Company and the Foster Petroleum Company. This well in the southeast of the southwest of the northeast of section 24-9-6, topped the Wilcox at 4220 feet and drilled to 4231 without encountering oil, gas or water. Well Number 1 on this lease found the top of the Wilcox at this level, but got water. This well was plugged back to the Hunton line and made a producer.

These two wells are in the play to the northesat of that centering about the Independent-Garland lease. Wilcox wells in this area have been lower in output than others. The Wilcox sand level has been running lower, indicating an edge to the pool to this direction.

The nine Wilcox wells now producing are in sections 14, 24 and 26. It remains for further drilling to determine if the area between these points will become a Wilcox pool, or that there will be two or three pools.

South and west of the Independent-Garland lease is the most closely watched area of the field not having production.

Well No. 2 Strother of the Pure Oil Company in the northeast corner of the southwest of section 26-9-6 had the top of the Hunton lime at 3943 feet, a depth favorable to finding the Wilcox high. Drilling has been halted until the rig can be repaired. It was pulled in when a second string of tools were run in the hole to drill past a lost string.

This well is a southwest offset to the discovery Independent-Garland well.

Directly south of the Independent-Garland well the Indian Territory Illuminating Oil Company's No. 1 Bowlegs in the northwest corner of the southeast of section 26-9-6, had the Hunton lime at 3975 feet. It is drilling below 4000 feet.

Estimates of peak production at Seminole City run from 60,000 to 100,000 barrels daily. These are but guesses, since drilling has not yet progressed sufficiently to indicate the area of the pool.

It will be possible to calculate somewhat accurately on Seminole City when No. 2 Fixico of the Gypsy Oil Company in the southeast corner of the northwest of the northeast of section 26-9-6 is finished. Formations in this well are running 100 feet lower than in its south offset, well No. 3 of the Independent-Garland partnership. This variation means either a fault or a depression in the Wilcox.

WILCOX SAND PRODUCING WELLS IN SEMINOLE CITY FIELD

Owner	Farm	No.	Description		Date Completed	Wilcox Sand Record	Initial Production	Oct. 8,1926 Production
Amerada-Gardner	Killingworth	1	SWc NE	24-9-6	Sept. 15, 1926	4120-4125	6,600	2,835
Carter Oil Co.	B. Carter	1	NEc	24-9-6	Oct. 2, 1926	4155-4170	1,700	1,240
Gypsy Oil Co.	Carter	1	SEc NE NW	24-9-6	Aug. 31, 1926	4170-4179	3,150	1,716
Independent-Garland	Fixico	1*	SWc NE	29-9-6	July 16, 1926	4055-4073	6,380	7,269
Independent-Garland	Fixico	2	SEc SW NE	29-9-6	Sept. 25, 1926	4101-4105	4,450	4,920
Independent-Garland	Fixico	3	NEc SW NE	29-9-6	Oct. 7, 1926	4077-4081	2,400	3,840
I. T. I. O. Co.	Reed	2	NWc SW NE	24-9-6	Oct. 1, 1926	4168-4182	2,000	360
Mid-Continent Pet. Corp	Rentie	1	SEc	14-9-6	Oct. 4, 1926	4188-4203	2,000	1,840
Tidal-Osage Oil Co.	Mahardy 1		SWc NE SW	24-9-6	Sept. 23, 1926	4187-4193	2,130	4,510

Panhandle Production Now 140,000 Barrels and Going Higher

Carson and Gray counties rapidly forging ahead as important producing areas

Amarillo, Texas.—Daily production in the Texas Panhandle district climbed to a new peak level of approximately 140,000 barrels during the past week, with most of the increase coming from a group of unusually large producers completed in Hutchinson County. This county accounted for 129,480 barrels of the district's output, and has a potential of ten or fifteen thousand more barrels daily should the dozen or more tests now shut down on the pay be drilled in and shot, while a number of the operators with a limited market outlet are holding back on shooting new completions.

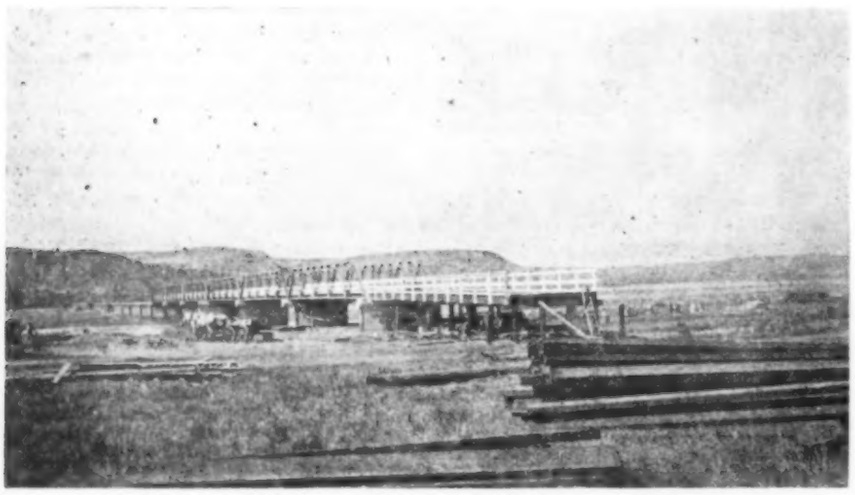
The flood of oil now prevailing in the Texas Panhandle is scheduled to mount to a higher level, as the Pampa-Wilcox field in Gray County is rapidly forging ahead as an important crude source, while the new producing area opened up early last month in northeastern Carson County by Roxana has been extended four miles east. The Roxana area has paved the way for about 30 new locations, while the new extension to the east will lead to a heavy drilling campaign on the acreage lying in between the two wells.

The Republic Production Company, Houston, proved up the Roxana area in Carson County to the east late last week when its wildcat test on the C. R. Garner farm began spraying 35 barrels of oil daily from sandy lime pay at 3056 feet, with the bit only several feet in the pay. This well is located in the northwest corner of the northwest quarter of section 103, block 4, and was shut down early this week pending the erection of tankage, while the Magnolia Pipe Line Company has been asked to furnish a connection. A third test in this area is setting 5 3/16-inch casing at 3117 feet, and may be drilled in before the close of the present week. It is being drilled by the White Deer Oil Company (Jim Whittington) on the Jordan Brown land, and located at the center of the southeast quarter of section 114.

PANHANDLE OPERATIONS

Amarillo, Texas.—Condensed summary of field operations in the Texas Panhandle district at the close of last week is listed below by counties, with comparative totals for the previous week:

	Completions	Active Tests	Shut Down	Rigs and Derricks	Locations	Totals
Armstrong Co.	..	1	..	..	..	1
Carson County	..	21	5	11	6	43
Childress Co.	..	..	1	..	..	1
Cochran Co.	..	..	..	1	..	1
Collingsworth Co.	..	1	1	1	1	4
Dallam Co.	..	1	1	..	..	2
Donley Co.	..	..	1	..	..	1
Gray Co.	1	78	14	9	2	104
Hanford Co.	..	..	2	..	..	2
Hartley Co.	..	5	3	1	1	10
Hemphill Co.	..	1	3	1	1	6
Hockley Co.	..	1	..	..	..	1
Hutchinson Co.	24	226	53	74	37	414
Lamb County	..	1	..	..	..	1
Lipscomb Co.	..	1	..	1	..	2
Moore Co.	..	7	5	1	..	13
Ochiltree Co.	..	2	2	..	..	4
Parmer Co.	..	..	..	..	1	1
Potter Co.	..	3	1	1	1	6
Randall Co.	..	..	..	1	..	1
Roberts Co.	..	1	4	1	..	6
Sherman Co.	..	1	1	1	..	3
Swisher Co.	..	..	1	..	..	1
Wheeler Co.	2	5	7	7	3	24
Totals	27	356	105	111	53	652
Totals for previous week	19	361	115	106	43	644



Bridging of the Canadian River with its treacherous quicksand beds in the Hutchinson County section of the Texas Panhandle will be completed in several months. This bridge will be operated on a toll basis until the initial cost is returned to the county. Most of the drilling equipment used north of the river is trucked 40 miles, while the bridge will shorten the distance to the nearest railroad point to about five or ten miles.

Price Investigation

The crude price investigation announced last week as having been started by Congressman Marvin Jones, Amarillo, in response to appeals made by small operators in the district, has attracted representatives of both state and federal governments, and the major buyers were given question blanks early this week to fill out.

Prairie Oil & Gas Company and Phillips Petroleum Company's Johnson 7-A, located in the northeast part of section 20 and north of Borger in Hutchinson County, proved to be the banner completion of the week. This well started off flowing 200 barrels of oil per hour from regular sandy-lime pay at 2980-95 feet, and increased to 375 barrels per hour about ten hours after completion, but 15 per cent water developed with this increased flow. The well was larger than anticipated, and earthen storage had to be used temporarily. The production was holding at 4100 barrels on Monday of this week, with the percentage of cut oil remaining the same.

Phillips Petroleum Company and Gibson Oil Corporation's Whittenburg-Patton 3, located about one-half mile northwest of the big Prairie-Phillips well, started flowing at 150 barrels per hour after shot of 60 quarts at 2860-88 feet Sunday, and was holding at 2500 barrels daily on Tuesday. Skelly Oil Company's Johnson 2, section 20, flowed 2075 barrels Monday at 2961 feet.

J. R. Phillips & Scott Heywood's Smith 2, section 14, which was shot with 480 quarts at 2960-3064 feet September 17 removed bridge formed by the heavy shot late last week, and the well flowed 2000 barrels initial.

Wilcox-Pampa

Gulf Production Company added another good producer in the Wilcox-Pampa field, Gray County, early this week when its P. A. Worley 5, located in the southeast quarter of section 83, flowed 45 barrels of pipe line oil per hour from sandy-lime pay at 2936 feet. Gulf's R. S. McConnell 1, located on the north line o fsection 175, block 3, and north of King's Mill, Gray County, was standing with 1000 feet of oil in the hole and light gas pressure from granite wash pay at 3130-40 feet. This test is in semi-wildcat territory, and cased off 23 million feet of gas with 6⅝-inch casing at 3090 feet. Young & Osborne et al's A. Holmes 1, on the east line of section 106, and east of the Wilcox-Pampa field, has been completed swabbing 15 barrels per hour after shot of 160 quarts at 3114-85 feet, with a total depth of 3200 feet.

Turbeville Most Productive North Texas Area

Wichita Falls, Texas.—The Turbeville field in Archer County contributed another quota of large producers during the past week, and is the most prolific are in the North Texas district now being developed. The Simms Oil Company, discoverer of the field, completed its J. H. Turbeville 9-A early this week swabbing and flowing 40 barrels per hour from regular sand pay at 1492-1527 feet, This well is located in the southeast corner of Simms' 80-acre lease. The Plains Production Company's Turbeville 3 swabbed and flowed 625 barrels initial from 26 feet of pay at a total depth of 1517 feet, while the same company's Turbeville 1 made 850 barrels initial.

The Petroleum Producers Company's Turbeville lease, which is located on the east end of the field, swabbed 750 barrels during 21 hour gauge from sand at 1492-1523 feet from its Turbeville 2, while No. 3 swabbed and flowed 810 barrels during a 15 hour gauge from sand at 1497-1522 feet. The Texas Company's Turbeville (40-acre lease) 10-C swabbed 52 barrels per hour initial, and 11-C swabbed 725 barrels daily from the regular pay sand.

The Panhandle Refining Company's Riley-Griffin 1, located in southwest corner of Wichita Caunty, swabbed 240 barrels on 14 hour gauge last week from sand at 1787-89 feet, and extended the producing area across the Wichita River to the west.

Murchison-Fain Oil Company's W. T. Waggoner 1-E, located in semi-wildcat territory in Wilbarger County, is rated good for 100 barrels daily with a small show of water from sand at 1974-92 feet. This well is located in the northwest quarter of section 51, H. & T. C. survey, block 4, and is an extension to the Noble-Dyson field, or a separate pool entirely. Tankage is being erected to complete the test.

Paul Konz, who is associated with C. W. Webster in leasing wildcat acreage blocks in West Texas, has returned to headquartres at Fort Worth after spending the latter part of last week with relatives at Independence, Kansas.

R. V. Mann, assistant to the president of the Carptenter Steel Company, Reading, Pennsylvania, has been in the Gulf Coast region of Texas and Louisiana for several days this week on company business.

Panhandle Production Goes Higher

Amarillo, Texas—Daily average production in the five counties producing oil in the Texas Panhandle district for the past week is listed below by companies, with the total producing wells included:

	Number Wells	Average Daily Prod.
Carson County—		
American Refining Company	7	515
Gates Oil Company	1	10
Gulf Production Company	14	395
Marland Oil Company	12	2,200
Roxana Petroleum Corp.	1	425
W. W. Silk et al	3	115
Skelly Oil Company	2	35
Sunny Jim Oil Company	2	45
The Texas Company	11	285
Totals	53	4,025
Gray County—		
Empire Gas & Fuel Co.	1	10
Gulf Production Company	2	1,560
Magnolia Petroleum Co.	2	75
McMan Oil & Gas Company	1	330
Prairie-Shamrock Pet. et al	3	1,060
The Texas Company	1	20
Wilcox Oil & Gas Company	7	2,750
Totals	17	5,805
Hutchinson County—		
Alasaka Petroleum Company	1	60
Amerada Petroleum Corp.	9	455
American Refining Company	2	75
Apex Oil Company	2	240
Badger Oil Company	2	175
R. G. Barnum et al	1	20
Buffalo Oil Company	1	35
Canadian River Oil Company	4	490
Canyon Oil Company	5	11,500
Center Dome Oil Company	1	.....
Cline & Douglas Oil Company	1	15
Coble-Whittenburg Oil Co.	3	950
Cockrell-McIlroy Oil Company	3	515
Continental Oil Company	1	.....
Currie Bros &J. R. Phillips	2	.....
Delmar Oil Company	1	40
Derby Oil Company et al	4	1,240
Devonian Oil Company	3	520
Dixon Creek Oil Company	21	7,000
Double Five Oil Company	1	60
E. J. Dunnigan et al	1	675
J. B. Dunnigan et al	2	280
Echo Oil Company	3	1,650
Empire Gas & Fuel Company	7	6,515
Fly-Blackburn Oil Company	2	250
Gates Oil Company	4	400
Goldelline Oil Corporation	2	300
Golding-Phillips Oil Co.	1	.....
Gulf Production Company	23	4,080
Gulf-Cline-Panhandle Ref. Co.	32	8,900
W. Scott Heywood et al	2	60
W. H. Holmes et al	2	60
Holmes-Currie & McKnight	3	450
J. K. Hughes Development Co.	14	2,190
Japhet Prod. Co. et al	3	645
Lucky Ten Oil Company	3	680
Marland Oil Company	34	17,710
S. D. & W. W. McIlroy	5	1,770
McIlroy Oil Company	3	300
McIlroy-Herring Oil Company	4	430
McMan Oil & Gas Company	15	5,790
J. H. Middleton et al	3	65
Mid-West Exploration Co. et al	6	1,260
Minnehoma Oil Co. & Kistler	1	80
Murchison-Fain Oil Company	1	390
Newby Oil Company	1	75
New England Oil Refining Co.	8	3,440
New Domain Oil & Gas Co.	3	125
Pattison-Lenix Oil Company	1	175
J. R. Phillips et al	1	25
J. R. Phillips-Heywood et al	2	1,500
Phillips Petroleum Co. et al	67	23,000
Prairie-Phillips Pet. et al	21	3,050
Relief Oil Company	3	845
Henry Riley & W. H. Holmes	2	420
Roxana Petroleum Corp	8	2,035
Ryan Con. Pet. Corp. (Morton)	3	475
Skelly Oil Company	13	3,800
Skiatex Oil Company	4	1,000
J. L. Smith	2	200
Smith-Bynum et al	2	275
Spring Creek Oil Company	4	900
Summit Oil Company	2	370
Sunburst Oil Company	2	1,450
Sunrise Oil Company	1	5
Sunny Jim Oil Company	5	700
Travelers Oil Company	2	625
Triangle Oil Company	2	3,000
J. D. Ward et al	2	110
White Eagle O. & R. Co. et al	17	3,390
Totals	416	129,480
Potter County—		
Amarillo Oil Company	1	30
Wheeler County—		
Continental Oil Company	2	195
Gibson Oil Corporation et al	2	150
Mid-Kansas Oil & Gas Company	1	30
Mid-West Exploration Co.	3	20
Totals	8	395
Grand totals for past week	495	139,735
Grand totals for previous week	472	125,185

KEEP HEAT STEAM AT EVERY TURN

Panhandle Has 17,000,000 Barrels Storage Built or Building

Conditions adverse to construction program; stocks 4,856 barrels

Amarillo, Texas—Seventeen million barrels of steel storage facilities are already in sight for the Texas Panhandle district, and most of the major crude purchasers and leading producers plan more large tankage after the present construction work is completed. Tankage requirements in the Panhandle are going to exceed the early expectations of those engaged in storing crude in the district, as the original plans to have most of the tanks empty at the beginning of the winter months have gone astray, owing to delay in receiving tank car movement of crude from the heaviest producing area in Hutchinson County.

Stocks of crude oil and steel storage in the Texas Panhandle district amounted to 4,856,500 barrels at the close of September, while slightly more than 50,000 barrels additional was in earthen storage.

Magnolia has the largest stocks with 1,455,000 barrels, and Phillips Petroleum is second with 852,400 barrels. Gulf has 843,000 barrels and Marland has 513,000. Prairie has accumulated 357,000 barrels against its pipe line outlet.

Steel storage facilities in the Panhandle were increased slightly more than 2,000,000 barrels during September. According to a survey made on October 1, the Panhandle district had 7,330,000 barrels of storage faciliities in the 126 completed 55's and 80's on that date, while the 149 55's and 80's actually under construction and enroute will add 9,745,000 barrels of room, making a total of 17,075,000 barrels of storage.

Earthen Storage Not Popular

Only two earthen storage tanks are being erected as result of the Railroad Commission giving permission late in August for Hutchinson County operators to build this type of crude reservoirs during the period of overproduction. Construction work is now underway on an earthen tank that will accomodate 500,000 barrels of crude, while the other tank building will have a capacity of approximately 200,000 barrels. Permit for a third tank, which was to have been 1,000,000 barrels capacity, was issued, but construction work has not been started, and it is not expected to be built. The earthen tanks must conform to the specifications outlined by Judge H. E. Bell, chief supervisor of the oil and gas division of the Railroad Commission, and must pass inspection before crude is placed in the reservoir.

The Marland Pipe Line Company has the largest tank building program underway in the district, with a total of 3,175,000 barrels of steel tankage completed and contracted for. This company announced last week that 20 new 80,000 barrel tanks would be built as soon as possible to ship the steel from the mills to a new tank farm site on the Burnett ranch in section 128, straddling the Carson-Hutchinson County line, while eight more tanks of the same capacity are being knocked down in Oklahoma and shipped to

Panhandle Storage Tanks

A complete survey on all large steel tankage in use, under construction in the Texas Panhandle district in October 1, 1926, is listed below:

Carson County—	No. Comp. Tanks	No. Tanks Bldg.	Size Tanks in-Bbls.	Location— Section, Block and Survey
American Refining Co.	..	1	55,000	SW¼ Sec. 115, I. & G. N. Ry. Sur., Blk. 5
Gulf Prod. Co.	1	..	55,000	NW¼ Sec. 106, I. & G. N. Ry. Sur. Blk. 5
Gulf Prod. Co.	9	25	80,000	NW¼ Sec. 8, T. T. Ry Sur. Blk. 2
Humble Oil & Ref. Co.	6	..	55,000	E½ Sec. 75, I. & G. N. Ry. Sur. Blk. 5
Humble Oil & Ref. Co.	..	4	80,000	E½ Sec. 75, I. & G. N. Ry. Sur. Blk 5
Marland Pipe Line Co.	2	..	55,000	NE¼ Sec. 116, I. & G. N. Ry. Sur. Blk 5
Marland Pipe Line Co.	1	..	55,000	NE¼ Sec. 38, T. T. Ry Co. Sur. Blk 5
Marland Pipe Line Co.	..	20	80,000	N½ Sec. 128, I. & G. N. Ry. Sur. Blk. 5
Plains Pipe Line Co.	4	..	55,000	NE¼ Sec. 113, I. & G. N. N. Ry. Sur. Blk. 5
Plains Pipe Line Co.	1	..	55,000	NW¼ Sec. 93, I. & G. N. Ry. Sur. Blk. 5
Plains Pipe Line Co.	2	..	55,000	NW¼ Sec. 38, T. T. Ry. Co. Sur. Blk. 2
Skelly Oil Co.	1	..	55,000	NE¼ Sec. 93, I. & G. N. Ry. Sur. Blk. 5
The Texas Company	1	..	55,000	NE¼ Sec. 93, I. & G. N. Ry. Sur. Blk. 5
Gray County—				
Humble Oil & Ref. Co.	2	..	55,000	N½ Sec. 87, I. & G. N. Ry. Sur. Blk. 3
Magnolia Pet. Co.	31	..	55,000	SW¼ Sec. 178, I. & G. N. Ry. Sur. Blk 3
Magnolia Pet. Co.	..	18	55,000	E½ Sec. 159, I. & G. N. Ry. Sur. Blk. 3
Prairie Oil & Gas Co.	4	22	55,000	Secs. 184 & 177 I. & G. N. Ry. Sur. Blk. 3
Wilcox Oil & Gas Co.	1	..	80,000	Sec. 62, I. & G. N. Ry. Sur. Blk. 3
Hutchinson County—				
Canyon Oil Co.	..	2	55,000	SW¼ Sec. 12, M. & C. Cur. Blk. "Y"
Coble-Whittenburg Oil Co.	1	..	55,000	SW¼ Sec. 12, M. & C. Sur. Blk. "Y"
Cockrell-McIlroy Oil Co.	..	1	55,000	SW¼ Sec. 14, M. & C. Sur. Blk. "Y"
Devonian Oil Co.	..	2	55,000	Tract No. 4, Mary Whitley Sur.
Dixon Creek Oil Co.	..	3	80,000	NW¼ Sec. 11, M. & C. Sur. Blk. "Y"
Dixon Creek Oil Co.	..	3	55,000	NW¼ Sec. 11, M. & C. Sur. Blk "Y"
Echo Oil Company	..	1	55,000	SW¼ Sec. 11, M. & C. Sur. Blk. "Y"
Emipre Gas & Fuel Co.	..	2	55,000	SW¼ Sec. 21, M. & C. Sur. Blk. "Y"
Empire Gas & Fuel Co.	..	2	55,000	S½ Sec. 68, H. & T. C. Sur. Blk. 46
Goldelline Oil Co.	1	..	55,000	NE¼ Sec. 89, G. C. & S. F. Ry. Sur. Blk. "Z"
Gulf Prod. Co.	4	..	80,000	NW¼ Sec. 90, G. C. & S. F. Ry. Sur. Blk. "Z"
Japhet Prod. Co.	1	1	55,000	SE¼ Sec. 11, M. & C. Sur. Blk. "Y"
Lucky Ten Oil Company	..	1	55,000	NE¼ Sec. 11, M. & C. Sur. Blk. "Y"
Marland Pipe Line Co.	5	..	55,000	SE¼ Sec. 11, M. & C. Sur. Blk. "Y"
Marland Pipe Line Co.	4	3	55,000	Sec. 18, M. & C. Sur. Blk. "Y"
Marland Pipe Line Co.	..	8	80,000	Sec. 18, M. & C. Sur. Blk. "Y"
Marland Pipe Line Co.	2	..	55,000	Sec. 29, H. & T. C. Ry. Sur. Blk. 47
McMan Oil & Gas Company	3	..	55,000	NE¼ Sec. 21, M. & C. Sur. Blk. "Y"
Mid-West Exploration Co.	..	1	55,000	NE¼ Sec. 5, M. & C. Sur. Blk. "Y"
Mid-West Exploration Co.	..	1	55,000	SW¼ Sec. 13, M. & C. Sur. Blk. "Y"
New England Oil Ref. Co.	..	4	55,000	SE¼ Sec. 13, M. & C. Sur. Blk. "Y"
J. R. Phillips et al	..	2	55,000	SE¼ Sec. 14, M. & C. Sur. Blk. "Y"
Phillips Pet. Co. (Bartex).	17	3	55,000	N½ Sec. 13, M. & C. Sur. Blk. "Y"
Phillips Pet. Co. (Bartex).	3	7	55,000	S½ Sec. 69, H. & T. C. Ry. Sur. Blk. 46.
Plains Pipe Line Co.	1	..	55,000	SW¼ Sec. 11, M. & C. Sur. Blk. "Y"
Prairie Oil & Gas Co.	5	..	55,000	Sec. 23, M. & C. Sur. Blk. "Y"
Relief Oil Company	..	1	55,000	NE¼ Sec. 11, M. & C. Sur. Blk. "Y"
Riley-Holmes et al	..	1	55,000	NE¼ Sec. 11, M. & C. Sur. Blk. "Y"
Roxana Pet. Corp.	2	2	80,000	Sec. 10, M. & C. Sur. Blk. "Y"
Skelly Oil Company	7	5	55,000	NW¼ Sec. 20, M. & C. Sur. Blk. "Y"
Skelly Oil Company	1	1	55,000	Tract No. 3, Mary Whitley Survey
Skelly Oil Company	1	..	55,000	Sec. 4, D. & S. E. Sur. Blk. B-4
Skiatex Pet. Co.	..	1	55,000	SE¼ Sec. 6, M. & C. Sur. Blk. "Y"
Triangle Oil Co.	..	1	55,000	NW¼ Sec. 5, M. & C. Sur. Blk. "Y"
Potter County—				
Amarillo Refining Co.	1	..	55,000	Amarillo, Texas.
Wheeler County—				
Mid-West Exploration Co.	1	..	55,000	Shamrock-Whitting field
Totals	126	149	17,075,000	BBls. capacity

SUMMARY OF STEEL TANKAGE

Size Tanks	Number Completed	Capacity Completed	Number Building	Capacity Building	Total Capacity
80's	16	1,280,000	62	4,960,000	6,240,000
55's	110	6,050,000	87	4,785,000	10,835,000
Totals	126	7,330,000	149	9,745,000	17,075,000

Marland's tank farm site and tank car loading rack near Isom, located in the heart of the Hutchinson County oil area.

Gulf's Storage

Gulf Production Company is a close second to Marland on tank building, and will have 3,095,000 barrels of storage facilities in Carson and Hutchinson Counties when the present tank building program is completed, with plans to add more storage as needed. Gulf is concentrating most of its crude storage near the town of Panhandle, which is the present south terminal of its eight-inch crude line. A large tank car rack is also being operated by Gulf at this point for shipping a portion of its own production, and that of a few other producers. Magnolia Petroleum Company's large tankage is located on two adjoining farms near Kings Mill, Gray County, and 2,695,000 barrels of tankage has been completed, or under construction, while considerably more will be added as needed. Magnolia is not making any effort to relieve its stock accumulation by shipping crude out in tank cars, and can be considered as a prospective constructor of a direct pipe line outlet from the district when storage oil and current crude production and purchases justify. Magnolia has been using dismantled tanks from the Corsicana-Powell district and from Oklahoma points at its Kings Mill farm, but will start buying new tankage shortly for future requirements.

The Prairie Pipe Line Company has completed four tanks and construction work is under way on 22 more at its Kings Mill tank farm located on the Carson-Gray County line, while five tanks have been completed near its producing properties in section 23, Hutchinson County. Prairie is standardizing on 55's and will have 1,705,000 barrels of storage facilities when the present campaign is completed, while this amount will probably be doubled before Prairie's eight-inch line from Oklahoma is completde next spring and placed in operation.

The Phillips Petroleum Company, which operates its pipe line gathering system and tank farms in Hutchinson County as the Bartex Pipe Line Company, has 1,650,000 barrels of storage facilities completed and under construction, while plans are to tear down tanks at Burbank and in Kansas fields to bring this total storage to 2,145,000 barrels. Phillips is also standardizing on 55's, and the tanks are being erected on two separate farms near the center of its producing properties.

Steam coils are being set in most of the Panhandle tankage to permit the movement of the crude during cold weather, otherwise it will be a costly and slow process to try and withdraw the oil from tanks not equipped with coils when the temperature of the crude drops below 50 degrees. Marland is having steam coils placed in all of its tanks. The coils are made of two-inch wrought iron pipe, and the joints are acetylene welded in the field. Steel roofs are also being used on most of the tanks, although the sulphur fumes arising from the crude allows only a short life for a roof.

Weather conditions and a shortage of labor has greatly retarded the tank construction work in the Panhandle lately, as heavy rains have made it difficult in trucking the steel to tank farms in upper Carson County and Hutchinson County. All of the steel listed in the accompanying table for Hutchinson County was trucked on an average of 30 miles, while that located on the north side of the Canadian River has to be brought down from Spearman, the nearest railroad point within reach by a loaded truck, a distance of about 50 miles. This long hauling will become a thing of the past in the near future, as the railroad extension from Panhandle to the heart of the Hutchinson County field will be open for freight next week, according to reports, and a wagon bridge is nearing completion over the Canadian River.

Another Russell County, Kansas Pool

Tulsa, Okla.—With the finding of oil in a sandy lime, 3027 to 3053 feet, in the southeast corner of the northwest of section 5-14-15 west, the Midwest Development Company is credited with uncovering another oil pool in Russell County, Kansas. The well is 10 miles from the Russell pool, now more than two years old. The well is credited with 120 barrels, flowing by heads, in 10 hours.

Midwest Exploration Company, a subsidiary of the Midwest Refining Company, holds 5,000 acres in leases around the well. Drilling of the well is the result of core drilling over the area. Cautious development is indicated from the way acreage is held.

Another Western Kansas wildcat, far from the Russell County development, reports the finding of oil in the Wilcox sand at 4260 feet in the Crawford-McKenna test in the northeast corner of the northwest of section 31-28-5 west, Kingman County. At this depth the hole filled 600 feet with oil.

There are now more than a dozen wells drilling around the recent Marion County wildcat of Frank et al, No. 2 Propp in the southwest of the northwest of the southwest of 8-19-4 east.

The Frank well has been put on the pump and is a small producer. Its performance is just sufficient to cause the drilling now in progress.

Charlie James, assistant to the general superintendent of Vacuum Oil Company in the Southwest division, is back in the Houston office after a business trip to Lockport field in Southern Louisiana.

Leasing Active Around West Texas Wildcats

San Angelo, Texas. — The Texas Company's R. King 9, located on the south line of section 11, block 3¼, in the Hurdle district of West Texas, was completed early this week flowing 300 barrels of fluid per hour from dolomite lime pay at 2150 feet, with about 50 per cent water. This well encountered the top of the lime at 1945 feet, with a surface elevation of 2517 feet, and had a small show of oil in the upper pay, which was topped at 2010 feet. The well is a north offset to Dixie Oil Company's Hughes 100-acre tract, which has been one of the most prolific in the district, with production holding despite the encroachment of water.

Lease buying has been active around the Wentz Oil Corporation et al's wildcat oil producer on the M. Shirk land, which extended the Hurdle oil field about three miles east late in September flowing 26 gravity oil by heads from regular lime pay at 2272-2331 reet. This well started off like a big producer, and lost casing seat when shut in for tankage. The production during the 12 hour gauge ending 7 a. m. October 11, amounted to 75 barrels oil and 20 barrels water by heads after casing had been re-set. The Texon Oil & Land Company, discoverer of the Big Lake field, set the pace on lease buying around the Wentz producer, and paid $1000 per acre, half cash, for the northwest quarter of section 35, thereby giving a diagonal northwest offset to the discovery well. Texon has purchased two leases slightly more than a mile north of the Wentz producer, and has contracted to drill one test. Humble paid $300 per acre cash for 120 acres in the southeast quarter of section 1, block 3, and Roxana paid $15,000 cash for an adjoining 40-acres on the east.

J. S. Cosden et al's Connell 1-A, located in the lower part of Ector County, failed to increase its oil and gas production when drilled three feet deeper in the gray lime early this week to a total depth of 3498 feet. This wildcat is located in section 13, block B-16, and made a flow of 90 barrels of 34.5 gravity oil when the bailer was put in the hole Sunday. The top of the oil pay was logged at 3465 feet, with a surface elevation of 2847 feet, and since the key formations were logged considerably higher than other wildcats drilled in this district a good producer was anticipated. The well was making about one-quarter of a million cubic feet of gas, but the flow of gas decreased when the hole was deepened to 3498 feet.

R. A. Westbrook & Company's wildcat test on the Hendricks land, Winkler County, failed to show an increase in oil or gas when deepened to 2800 feet during the past week. This well

was credited with having oil in the hole at 2744 feet with a million cubic feet of gas, but deeper drilling did not help the production, and the gas flow was cut in half.

The Ideal Oil Company, Denver, Colorado, has a second show of oil in its wildcat test on the W. F. Martin land, Fisher County, in gray lime at 3413-20 feet. The oil began showing in the slush pit at 3413 feet. This wildcat is located in the northwest corner of section 113, H. & T. C. survey, block 1, and developed a small rainbow of oil at 3390 feet after getting the top of the big lime at 3345 feet. Gulf purchased four 160-acre tracts and The Texas Company two tracts of the same size from the Ideal Oil Company at $18.00 per acre before the test reached the top of the lime.

The Marland Oil Company has installed an air compressor to build up the rock pressure on the sandy-lime pay on its A. S. Burleson lease in the Hurdle district, having taken its Burleson 4 off production and using it as the medium for feeding the air into the pay formation. Early reports on this experiment indicate that nearby wells have been benefitted by the air.

Test Trinity Sand West Of Mexia Field

Mexia, Texas.—A joint test will be drilled by the E. L. Smith Oil Company and associates on the west side of the Mexia field to try for oil production in the Trinity sand. The location has been made on the Jake Steubenrauch 246 acre lease on the west edge of the Mexia field, and contract has been awarded to Farrish-Wattes and Collins to drill the hole to 5500 feet for a consideration of $40,000. Humble and Magnolia are reported to own a third interest each in this deep test, while E. L. Smith Oil Company, J. K. Hughes Development Company and the Reiter-Foster Oil Corporation have divided the remainingone-third interest three ways. The above companies have leased a solid strip running the full length of the Mexia field, and the width of the strip averages about one-half mile.

Humble Oil & Refining Company's wildcat test on the Gunter land near Thornton, Limestone County, bailed salt water after getting a show of oil in sand and shale at 3035-46 feet, and will standardize to make a try for the Trinity, according to reports.

Deeper Wells

Great Falls, Mont.—As the result of recent completions in the Madison lime in the Kevin-Sunburst field, several of the larger operators have begun deepening their small Ellis sand wells. The Ellis sand is very thin in some parts of the field and production is not satisfactory. The Madison lime formation is within reach of the bit in almost any part of the field.

Shackelford Oil Producer Opens Wide Territory

Cisco, Texas.—Oil production was discovered in the southwest part of Shackelford County during the past week when the Mid-Kansas Oil & Gas Company's wildcat test on the W. C. Goodwin land, section 76, block 13, flowed by heads at rate of 50 barrels daily from sand at 1560-78 feet. This wildcat drilled through the pay into shale at 1578-82, and was preparing to test out a lower sand early this week with the bit three feet in the bottom pay. This producer is about nine miles southwest of the nearest oil production, and opens up a big stretch of territory for exploration.

The Tannehill Oil Company's Moberly 1, section 59 which was reported last week as having extended the Cook Ranch field in Shackelford County a half mile to the southeast, was deepened to 1134 feet, and registered a flush flow of 500 barrels of 39 gravity oil with about two million feet of wet gas. This well topped the sand at 1127 feet. Roeser-Pendleton Inc.'s W. I. Cook 1-B, section 60, located on the southeast side of the original Cook Ranch field is credited with having flowed 1250 barrels flush after drilling sand pay at 1282-96 feet.

The Lester-Fry field in western Brown County continues to spread out over a larger area, and during the past week Choate-Henshaw and associate's Lowe 1 extended the proven territory more than a quarter of a mile to the southeast and across Jim Ned Creek with an initial gauge of 11 barrels per hour from eight feet of sand at a total depth of 1308 feet. This well proves up the lower ends of Wm. V. Lester and Amerada Petroleum Corporation's leases, while it also gives The Texas Company an offset.

Andy Urban and others' semi-wildcat on the Gray Ranch in northeastern Coleman County was showing for a 30-barrel producer early this week after drilling one foot in the oil sand pay at a total depth of 2504 feet. A string of 5 3/16-inch casing is being set to drill deeper, and in the meantime the well is making occasional small heads of oil.

Three New Wells Opened At Pierce Junction

Houston, Texas.—Three completions at Pierce Junction during the past week and finding oil sands in three other wells brought renewed interest to the drilling campaign under way in the west extension of the field.

J. F. Bashara's Higgins No. 1 made an initial of 1200 barrels 24 gravity oil from 3575 feet, and the Navarro Oil Company completed its Humble Fee No. 1, flowing 10,000,000 feet of gas and spraying about 250 barrels of oil, both wells in the center of the west extension. In the old east side of the field Gulf Production Company's Taylor No. 18 came in for an estimated flow of 500 barrels by heads from 3950 feet, but sanded up shortly afterward.

Marland Oil Company of Texas, drilling its Liggett No. 1 more than 100 feet north of the Humphreys-Pure location and approximately 300 feet north of the northernmost production in the extension, had good indications of extending production after finding an oil sand at 3685-3702 feet. Rio Bravo's Fee No. 4 encountered the pay level at 3590-3628 feet and twisted off a core barrel. The Gulf passed up an oil sand at 3528 feet in its W. H. Jones No. 1-A in search for better prossibilities at a lower horizon.

Rio Bravo was drilling early this week at 1525 feet in the Settegast B-1, located 750 feet south of the center of activity in the new extension and was 2310 feet in the FGee No. 5. J. F. Bashara made his fourth location following his last completion.

H. T. Staiti, an early operator at Pierce Junction, is drilling at 3400 feet seevral hundred feet north of the east field. The strike in the west side has given impetus to work in the east side, and several old wells are being worked over.

Marland Companies Close Fort Worth Office

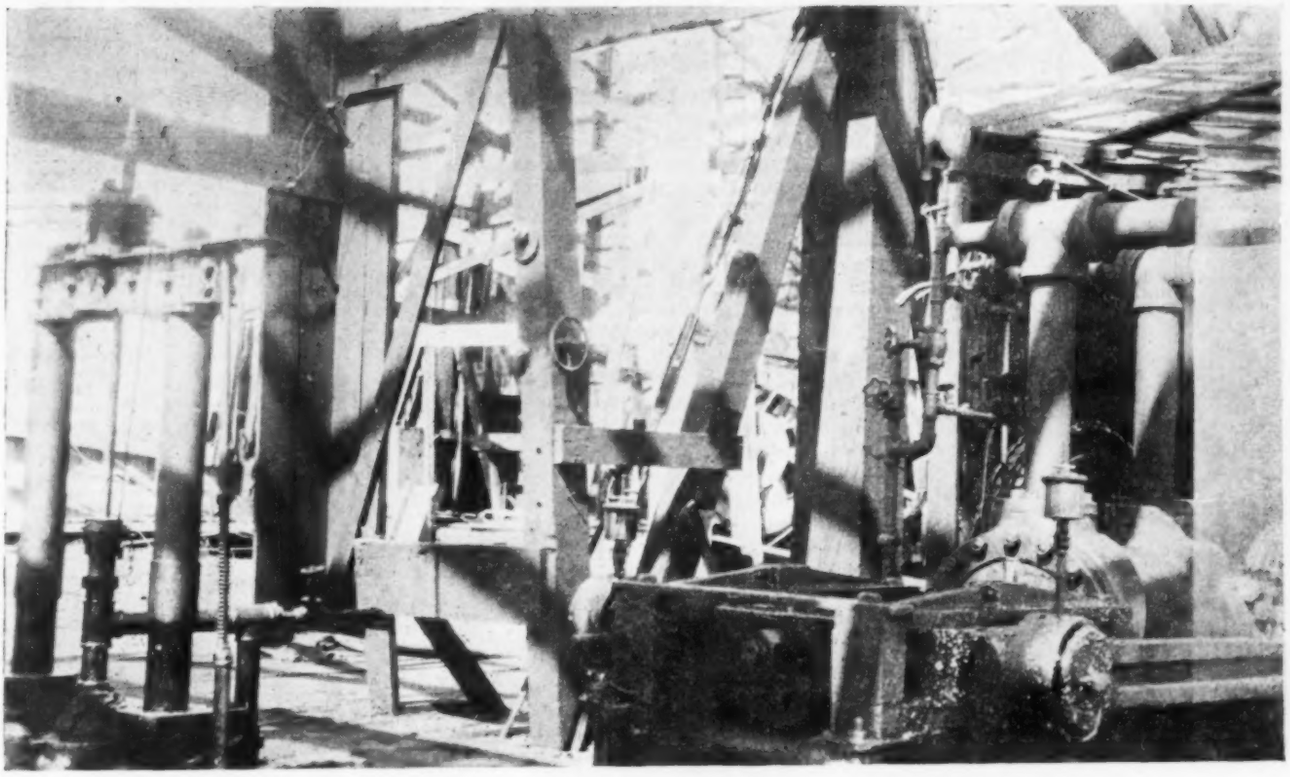
Fort Worth, Texas.—Division offices maintained in Fort Worth by the Marland Pipe LineCompany, Kay County Gas Company (Marland's crude buyer) and the Reagan County Purchasing Company, Inc., will be transferred late this week to Marland's general headquarters at Ponca City, Oklahoma. The Texas division of the former two concerns will be dissolved, and the employes will be absorbed by the general offices at Ponca City.

H. B. Drake, who has been in charge of the Texas division of the above three concerns, will go to Ponca City and carry on the same duties, while it is understood that he will also have charge of operations of the Kay County Gas Company in Oklahoma and Kansas, working under C. C. Brown, president. The Marland Pipe Line Company and the Kay County Gas Company will maintain a Texas representative at Fort Worth, and H. J. Corcoran has been appointed to the position.

Notches Structure

Casper, Wyo. — Midwest Refining Company apparently has another good producer on the Notches structure, section 3-37-35, 50 miles northwest of Casper. The Tensleep sand was found at 2575 feet and oil was in evidence. The well will not be completed at this time. The first producer was completed at approximately the same depth and flowed consistently at the rate of 400 barrels daily. It was the only flowing black oil well in the state.

Clyde M. Bennet, of Shreveport, vice-president of the Louisiana Oil Refining Corporation, is receiving treatment at Battle Creek, Michigan.



Hydraulic Pumping Outfit showing position of pump and jack, on Stroube and Stroube's Hill lease, in the Powell, Texas, field.

Hydraulic Jack Gets Good Results Pumping Wells on Powell Lease

Long stroke equipment effective in increasing output of wells making much water

By A. R. McTEE
Staff Representative

HANDLING heavy volumes of water to get maximum oil recovery is a problem which every operator in the Mexia-Powell district has to face. To meet the problem, various kinds of equipment are called into use, ranging from the newest devices to be had on the market to homemade contrivances. On Stroube & Stroube's lease at Powell, the hydraulic pumping outfit, manufactured by the Pacific Oil Tool Corporation, Los Angeles, California, is being used with much success in handling the total volume of fluid. According to the superintendent of this lease, the hydraulic pump is the most satisfactory installation tried out so far.

This outfit is comparatively new in the Mid-Continent, the only other field in this section where it is in use being Tonkawa, Oklahoma. It is understood that the pump is operating there with as much success as at Powell.

Economy of operation is not a feature of the outfit, inasmuch as the regular standard rig is necessary. However, when it comes to taking care of an extraordinarily large amount of fluid, the outfit has its advantages.

Briefly described, the outfit consists of three parts, the pump that handles the water, the jack, and a storage tank for water. A compressor is also necessary, but this is generally lease equipment and not a regular part of the pump installation. Stroube has one compressor for all four pumping outfits.

Jack is the Feature

The jack is really the feature of the installation. It is set 24 feet in the ground, over the well, and connects with the pump by a four-inch outlet tied in at the bottom of the jack. The pump is operated by a 40 horse power gas engine, and is connected to the water storage tank by a four-inch intake and outlet lines.

Water from the tank is forced into the pump under pressure ranging from 220 to 280 pounds. The pump then puts the water into the jack, at the bottom, forcing the jack up. The weight of the rods then forces the jack back down, and the water goes into the pump. The pump releases on the down stroke, letting the fluid back through the four-inch line into the storage tank, completing the cycle.

When the jack is down the pump is on the up stroke, and vice versa.

Nine Foot Lift

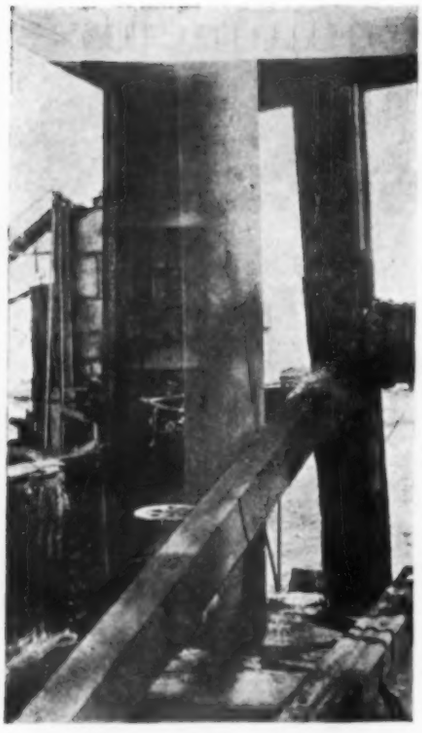
The jack is constructed so that it gives a nine-foot stroke, an advantage of about five feet over the average jack. One jack can handle a maximum of about 1100 barrels of fluid.

The pump is equipped with two sprocket wheels giving a double chain drive, to insure against break-downs.

Stroube & Stroube uses a 40 horse power engine with each outfit, and do not recommend a lighter engine. Neither do they recommend the installation of these jacks on small oil wells with a comparatively small volume of water.

The Powell lease has four of the jacks in operation. Three are run with gas engines, and the fourth is connected to a motor. There are three other wells on standard pumping outfits.

Before installation of the hydraulic jacks, the total oil recovery from the lease

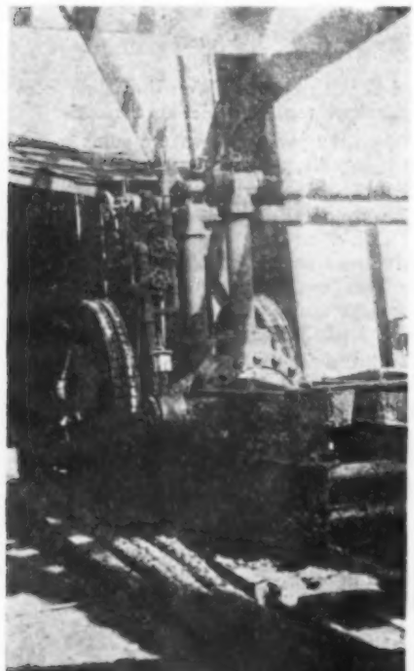


Storage tank for water

was slightly above 700 barrels. Now the daily average is 1000 barrels, principally from the four wells being pumped with the hydraulic jacks.

To get this amount of oil, it is necessary to pump approximately 2000 barrels of water, or an average of 500 barrels per well. Average depth of the wells is 2970 feet.

Each well being pumped with the hydraulic jack is equipped with a 17-foot working barrel, two and one-half inch tubing, and one and one-quarter inch polish rod.



Pump, showing chain drive

No Rod Troubles

The lease superintendent favors the jack principally because of its long stroke and its freedom from vibration. He has had practically no rod troubles on the wells operated with the jack.

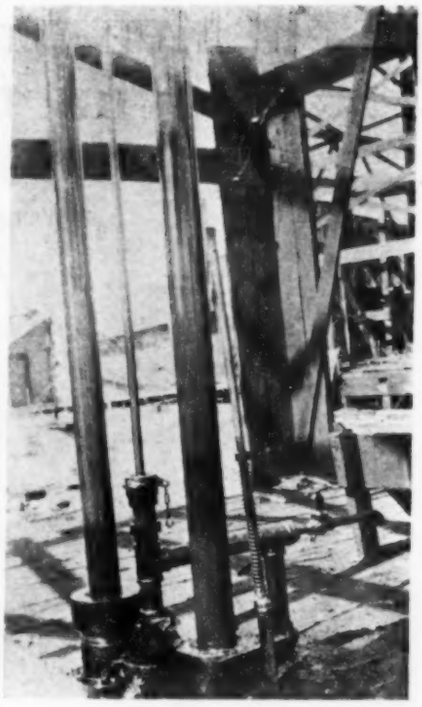
Among other modern equipment on the lease is a Nuttall Reduction gear. This has been in use for 14 months, with a 15-30 General Electric motor. The outfit was installed to eliminate the belt drive. The particular well pulls heavy and gave an unusual amount of belt trouble, so it was decided to install the reduction gear.

Stroubes' lease has a record of being among the most productive in the Powell field. Its output has held up unusually well in the face of heavy water encroachment.

Although the lease is efficiently managed from every standpoint, the superintendent fells that the good record maintained is due solely to keeping all the wells pumping. Every man on the lease is impressed with keeping the wells pumping continuously, and with getting the maximum amount of fluid, consequently the maximum oil recovery.

The lease is operated with a crew of 12 men, eight on the day shift, and four at night.

All wells on the lease have been plugged back in an effort to shut off bottom water. Four of the jobs were successful. Two were complete failures, and the other was poor.



Jack, showing maximum stroke

Piedras Pintas Results Not Encouraging

Houston, Texas—During the eleven months following the completion of the Humble Oil & Refining Company's first producer at Piedras Pintas, which came in last December as a 1,500 barrel well, results in drilling on the dome there have been discouraging in the extreme. Only one producer has been completed following the Humble's No. 4 Walsh (the first producer), while a scattering of deep, dry holes has marked the progress of the drill since last December.

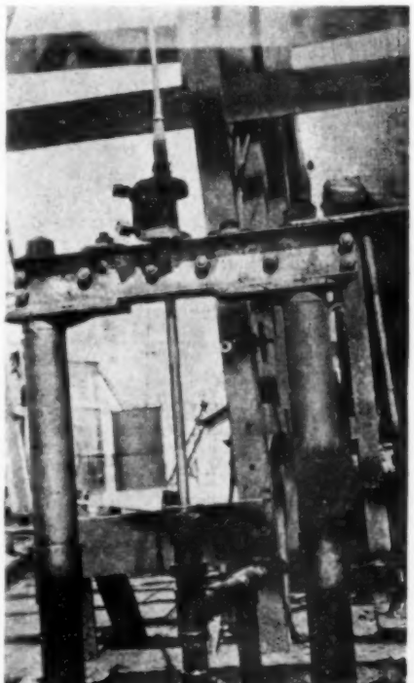
At this time only one rig is running on the dome, the Humble Oil & Refining Company's No. 1 Becher, across the dome from No. 4 Walsh.

Results during the past eleven months may be totalled as follows:

Humble Oil & Refining Company's No. 5 Walsh, dry and abandoned at 3346 feet. This test is 500 feet south and 100 feet east of No. 4. No. 6 Walsh, located 500 feet north of No. 4, is a five-barrel pumper at 3596 feet. No. 4 is now off production, but when pumping ordinarily makes about 115 barrels per day.

The J. K. Hughes No. 1 Peters, a mile northeast of No. 4 Walsh, was abandoned, dry, at 3989. Moody-Seagraves' No. 1 Walsh was dry and abandoned at 3612 feet. Greyburg Oil Company's No. 1 Halff, a mile north of No. 4 Walsh, was dry and abandoned at 4205 feet. The Magnolia Petroleum's No. 1 Speer was dry and abandoned at 4008 feet.

Oil from the field is now being moved by tank car, although the Humble Pipe Line Company's eight-inch line run through the field.



Jack on down stroke, showing detail of construction

Field Men Are Consulted in Equipment Buying for Pure Oil Company

Decisions and wishes of superintendents are given weight by purchasing department

By GRADY TRIPLETT
Staff Representative

IN order to bring its producing, purchasing and engineering departments into harmony in the buying of field equipment, the Pure Oil Company gives its field superintendents authority to order, untried equipment, "For Trial Purposes."

Under this arrangement a salesman is offending no other department when he goes into the field and sells direct to a superintendent. When a superintendent considers equipment to have sufficient merit to demand a trial, he fills a regular requisition, across the bottom of which he writes, "For Trial Purposes."

This requisition takes the course of any other requisition, being mailed to the purchasing department. The notation at the bottom means that it will be passed along to the engineering department before purchase order is made and sent to the supply house.

The engineering department then begins its investigation of the equipment. Its construction and engineering principles are studied. If the equipment is complicated or its working not already understood, a representative of the manufacturere is called so he can bring blue prints and other data and at this visit he is given opportunity to further explain the purposes and workings of the equipment.

Another reason for giving the requisition to the engineering department is to allow a check against records to see if identical equipment has been bought previously under similar conditions.

This check prevents several superintendents from ordering identical equipment, while the trial is still in progress. A new working barrel, for instance, may be ordered by one field superintendent. The order takes its reguar course and the engineering department approves the trial. So the working barrel goes into a certain well for trial.

That purchase may be in Oklahoma. Another may come through from Texas and be allowed, since well conditions in the two territories are so different, the barrel should have the double trial. Two or three of the barrels are considered sufficient for trial.

So there is no need for further trial purchases until something definite has been learned. The check of the engineering department prevents too many articles being bought for trial.

After an article has been put to work in trial, it is the duty of the engineering department to follow its performance, taking information from the field or production superintendent as to its success.

By following this method, the Pure Oil Company can test any piece of new equipment on its three main assets. One is its performance in the field. The other is the engineering principle upon which it is built. The third is price, which is work of the purchasing department.

This method of introducing new equipment has several advantages. One of these is that the seller of the equipment knows how to go about getting his equipment introduced for trial by the company. He knows the field superintendent has authority to buy on trial, where similar equipment has not been previously used by the company. He knows what course the requisition will take in the headquarters office, so he can follow the progress of the order.

It is a general policy of the Pure Oil Company to have equipment orders originate in the field. Where the equipment already has been tried out, the field superintendent's requisition goes into the purchasing department to be passed along to the manufacturer or supply house.

And no substitution is made until the field superintendent has been consulted. The purchasing department may consider the product of some other manufacturer better or cheaper. But the requisition is not changed until the field superintendent has been consulted.

In seeking to make a substitution, the purchasing department states its reasons for desiring to order the product of some other manufacturer. If the change is agreeable to the superintendent, the change is made. But if the field superintendent insists on the product mentioned on his requisition, the purchase order goes to that manufacturer, regardless of other conditions.

Land Suit Decided

Casper, Wyo. — The Consolidated Royalty Oil Company is the rightful owner of certain valuable oil lands in the Salt Creek field, according to a decision recently handed down in the United States district court by Judge Colin Neblett, who ruled that the plaintiff, Henry A. Miller, had not presented sufficient claims to the lands. The suit involved old placer claims which dated back to 1888.

Left: W. G. Skelly, president Skelly Oil Company. Right: Col. E. Walters, auctioneer of Osage Leases. Center: John Hawthorne, financial editor of the New York Journal. Shortly after this picture was made, Col. E. Walters knocked down tract 180, adjoining the Burbank pool, to Mr. Skelly for $415,000. Mr. Hawthorne is a grandson of Nathaniel Hawthrone.

Magnolia Southwest Texas Ready to Begin Runs

Laredo, Texas—Magnolia Pipe Line Company's eight-inch line extending from the Luling field to the company's tank farm in the Mirando district, in Southwest Texas, is scheduled to begin running oil from the latter point during the last week in October. This line is 180 miles in length, and is welded. Magnolia's line from Luling to Beaumont is also eight-inch in size, and welded.

Construction work on Magnolia's Luling-Mirando line was started early last July, and excellent time was made, considering that most of the pipe had to be trucked about 50 miles, owing tc the scarcity of railroads in this section of the state. The hauling of the pipe was contracted by Rube Stuart of Beaumont, while Ed. A. MacPherson, Fort Worth, has the contract on ditching and backfilling of the pipe trench. Magnolia used its own crews in welding the pipe, with W. A. Sniffen, general superintendent, in charge.

The operation of the Mirando line will be started with one pump station at Mirando City, but a second station is is being built near the half way point and about 10 miles north of Fant City, Live Oak County. The Mirando City pump station is equipped with two 100 h. p. De La Vergne engines and a pair of 7,000 barrels capacity National Transit pumps.

Magnolia has accumulated approximately 1,250,000 barrels of crude at its Mirando City tank farm, and current runs from the district amout to slightly more than 5,000 barrels daily.

This line will be the second direct pipe line outlet for the Mirando district, as Humble Pipe Line Company recently completed an eight-inch line from Bruni, Webb County to tidewater at Ingleside, between Port Aransas and Corpus Christi, a distance of 110 miles. The Mirando district is producing about 17,500 barrels daily, with an active development and wildcat campaign underway. The oil is mostly low gravity, but has a good lube content.

Break Depth Records For Gulf Coast

Houston, Texas.—Three depth records are added to the Gulf Coast country as the search for deep pay continues in the coastal section of Louisiana.

The Pure Oil Company is preparing to test a sand in its Sweetlake No. 3 wildcat, Calcasieu Parish, at a total depth of 5897 feet topped at approximately 5880 feet. This is the deepest oil show yet encountered in the coastal territory.

Vacuum Oil Company was drilling October 12 at 6110 feet in its Lock Moore No. 4 well at Lockport field, Calcasieu Parish, which breaks the deep hole record in the coast by 83 feet. The Vacuum's Phoenix B-1 was abandoned early this year at 6027 feet. The Lock Moore No. 4 had a gas show at 6012 feet, the deepest gas ever penetrated in the coastal territory.

Vacuum Oil Company's Freiberg & Wolf No. 1, the Gulf Coast's deepest producer from 5476 feet, was flowing slightly more than 300 barrels October 11, after being completed in August.

Gulf Finds Deep Show in Fannett Wildcat

Beaumont, Texas.—The Gulf Production Company's Bordages No. 2, wildcat, drilled in the south part of the Munson Bouse 320 acres at Fannett, 10 miles southwest of Spindletop, in Jefferson County, offers some possibility of opening a new productive area in the salt dome country after drilling into a sand showing oil at 5100 feet last week. Operators had penetrated 19 feet of sand when the drill stem stuck. A hard fishing job is under way with little success seen at the opening of the present week.

The Gulf has carried on consistent exploitation work at Fannett for more than a year following the location of a salt dome there by Roxana, the latter company shooting the territory with the seismograph. Although the Gulf has the largest tracts under lease in the vicinity of the Bordages test, other companies are holding possible productive land, including the Roxana, Atlantic and Sun Company, together with some independents.

The Gulf's Thomas No. 9 wildcat test, also at Fannett, was drilling early this week at 3394 feet in a hard sand.

Rocky Mountain Resume

Casper, Wyo.—A resume of drilling operations in the Rocky Mountain region during the month of September shows a gain over August in rigs, the number of drilling wells, completions and initial production. The number of rigs increased from 161 to 179, completions jumped from 157 to 182, drilling wells numbered 439 as against 412 while initial production recorded soared from 23,915barrels to 26,275 barrels. In the face of an early winter, all increases are regarded as unusual. In New Mexico, the number of drilling wells has reached 50. Completions during the month numbered 22, a good gain over the previous month. There was a good gain in other states.

Anderson County Wildcats

Palestine, Texas.—The Humble Oil & Refining Company's No. 2 Southern Pine, on the Anderson-Cherokee County line, after bailing salt water following a showing of oil and gas slightly below 2550 feet, is setting an inside string in an attempt to cut off the water.

Killam to Lay Gas Line in Laredo District

Laredo, Texas—A deal was closed during the past week between O. W. Killam of Laredo and the Southern Natural Gas Company of San Antonio, for the construction of a gas pipe line to the gas fields of Jim Hogg County. Killam is to build the line from a connection in the east upper part of Webb County, where the Southern's pipe line to San Antonio connect with the Cale and Carolina-Texas fields, to the new gassers, approximately 25 miles south and west.

Killam has also made a contract with the company to purchase his gas from the wells in the Henne, Winch and Farrisss pool. At preesnt, these wells are shut down, waiting pipe line facilities. This pipe line also will aid other owners of gas wells in the district and will cause a number of wells to be drilled in an attempt to complete oil or gas producers.

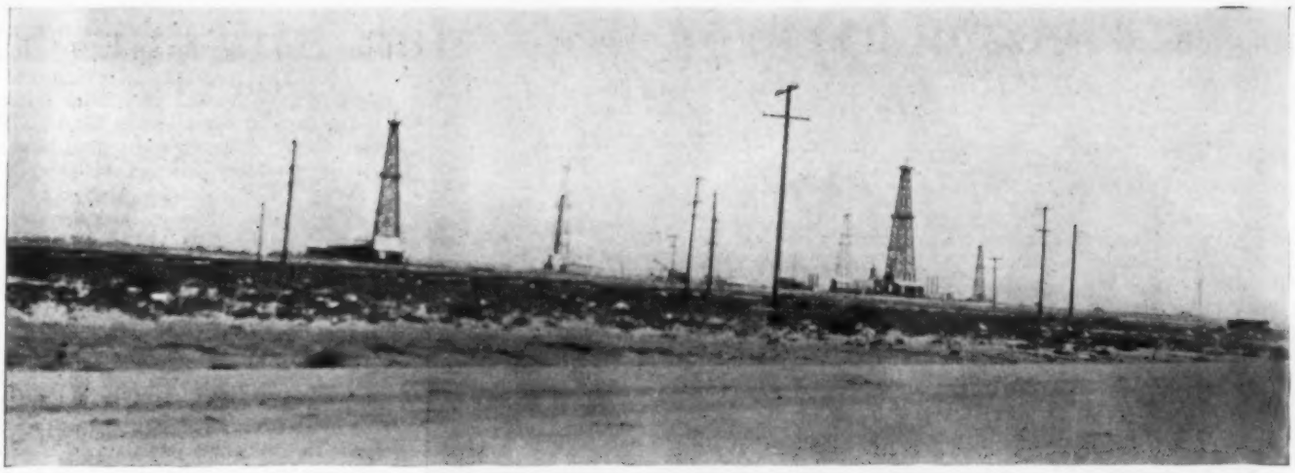
A number of wells, producing from 50 to 800 barrels were completed during the past seven days. Severl gassers were included in the week's new producers.

Standard Officials See Wyoming Properties

Casper, Wyo. — Directors of the Standard Oil Company of Indiana, including Col. R. W. Stewart, chairman of the board, spent a part of the week inspecting the company's holdings in Wyoming. The Midwest Refining Company is the chief operating organization of the company in the Rocky Mountains. The officials expressed pleasure at the way in which its properties had been developed and managed. Besides Colonel Stewart, the following officials were included in the tour of ispection: W. M. Burton, president; Beaumont Parks, vice-president; E. G. Seubert, vice-president, secretary and treasurer; E. J. Bullock, purchasing department; Allan Jackson, vice-president, and R. H. McElroy, traffic manager. The board of directors of the Midwest Refining Company also met with the Standard officials.

Open Gas Structure

Casper, Wyo. — The Baxter Basin field, one of the largest gas structures in the Rocky Mountains, will see considerable development during the next few months as a result of recent, favorable plans for the building of gas lines from the field to nearby cities. Midwest and Ohio Oil interests practicaliy control the center of the field. The newest developments will center around the edge of the structure. Independent interests have acquired acreage in what is claimed to be an extension of the field and will drill two tests immediately.



Seal Beach, California development as of September 22, 1926, or a few weeks after the completion of the Marland discovery well. At this time eight rigs are all that the field claims, all eight of which are shown in the photograph. At present four of these rigs are steel and four are wood. Only one well is producing. It is highly probable that a photograph taken September 22, 1927, will disclose and entirely different sort of scene.

Five New Producers at Huntington Beach; California Production Up

Ten wells are nearing the production level and should be completions within two weeks

By GEORGE REID
Staff Representative

Los Angeles, Cal.—During the week ending October 9 the deep zone of the Huntington Beach new townsite area has contributed five producing wells, bringing the total completions to date for this district ot 13. Two of these are producing from the upper stratum, the remaining nine wells are classed as deep producers.

Geo. F. Getty followed up his success of last week when he brought in Huntington Beach No. 4 from 4000 feet, doing 1100 barrels, by completing Getty's Huntington Beach No. 5 on the same property this week. Getty's second well is producing 750 barrels from the same depth; making 24 gravity clean oil.

E. J. Miley Oil Company completed Pacific Electric No. 4 at 4007 feet producing around 1600 barrels. The Standard Oil Company, which is the biggest operator in the area, completed its Anderson No. 1, which was drilled to 4032 feet, as a 650 barrel producer of 24.5 gravity clean oil. The Standard's Huntington No. 3, which was completed this week at 4068 feet for 850 barrels, yielded oil of little lower gravity than that usually produced from the lower sand. The gravity of oil at this well is slightly under 21 degrees. Standard Oil Company's Huntington No. 5, now at 4034 feet is scheduled for the next completion by this company.

Superior Oil Company contributed one well to this week's list of completions when it completed Babbit No. 1 at 4002 feet, making better than 400 barrels of 24 gravity oil. Superior's Gilmore No. 1, drilled to a depth of 4019 feet, has been delayed in completion because of water trouble, but it is thought that the water difficulty will be over come and the well put on production soon.

At present, there are 35 wells making hole between 3000 and 3500 feet, indicating that all of these operations will be carried to the deeper sand. The few tests of the upper sand made lately tend to confirm the conclusion that the upper sand it not worthy of development, and some companies formerly producing from the upper sand have resumed drilling operations, deepening their wells to the lower zone.

Below 3500 feet there are 19 operations, several of which are very close to the deep pay. The Ambassador Petroleum Company is drilling in shale at 3600 feet in its Huntington Beach No. 8. California Petroleum Corporation is drilling ahead at 3693 feet in its Plaven No. 1 and its Turner No. 1 is reported as drilling in shale at 3801 feet. Geo. F. Getty, in his townsite well No. 6, is also drilling in shale at 3820 feet. Hogan and Lytle are drilling their No. 1 well in hard oil sand at 3841 feet. McKeon Oil Company at its Huntington No. 1 is preparing to drill out cement at 3894 feet. Paragon Oil Company's Lewis Community well is drilling through shale at 3812 feet. Petroleum Securities Company has two wells below 3500 feet; its Nonsal No. 1 at 3603 feet and its Machris No. 1 at 3616 feet. Standard Oil Company, besides having its Huntington No. 5 drilled to a depth of 4034 feet and ready to bring in has another well very near the deep pay in its Huntington No. 4 whcih is reported as drilling in shale at 3960 feet.

Superior Oil Company has three wells very near to the deep zone. Its Babbit No. 1 is now classed among the producers, and its Gilmore No. 1 is held up because of water troubles. In addition Superior has its Chudnow No. 1 drilling through shale and streaks of oil sand at 3963 feet; its Fee No. 1 reaming at 3851 feet, and its Gillette 7, No. 1, drilling in shale at 3737 feet.

U. S. Royalties Company is drilling in shale at 3613 feet. Wilshire Oil Company is drilling through shale at 3665 feet in its Huntington Beach No. 2. Its Huntington Beach No. 3 is reported at 3896 feet.

Of the 19 operations included in the foregoing list, ten of them are in some stage of development below the 3800 foot mark and in the event of no accidents these wells should be listed among the producers in the next two or three weeks. The 35 operations under way between 3000 and 3500 feet will, no doubt reach the deep pay soon after the completion of those wells now nearer the zone. As a consequence of this intense drilling campaign, Huntington Beach townsite production will show a marked increase in the next two months. A resume of field operations at present shows a total of 153 operations in the newly developed area. Of the drilling wells, 120 are working, three are idle and only one abandonment is reported. There are 29 active producers of which number Standard Oil has 23 wells producing 3900 barrels. Geo. F. Getty has two producing wells, Superior Oil Company has one; E. J. Miley Oil Company is producing oil from two wells, Superior Oil Company has one and

View of the newest, and probably narrowest lease in Huntington Beach's new area of development. This is called the Standard's Bluff lease, being leased for development by the Standard Oil Company of California, by means of a three cornered arrangement between the Pacific Electric Railway Company and the Huntington Beach Company, owners of the narrow stip of land between the railway proper and the bluff. So narrow is this strip that at places the bluff must be filled in and walled to make room for the derrick setting. The illustrations show the cellar and foundation digging, and the boilers in the background. The cool surf in the background, as shown in both illustrations, offers a constant temptation to the hot workman employed as shown. At the time of the photographing, Southern California was enjoying one of its famous "gray days."

Wilshire Oil Company has one. Production for the area has climbed this week to 8100 barrels from 6800 barrels as reported last week. The Standard Oil Company and the Superior Oil Company are the only two operators producing oil from the upper or shallow sand; each company having one well in the upper stratum.

Long Beach Production Up

Long Beach area producing from Signal Hill and the Los Cerritos fields has staged a come back this week, despite the gloomy prophesies of many producing organizations. The district has shown an increase in production from both fields. The old field, or Signal Hill, climbed from 85,000 to 86,250 barrels, and the Los Cerritos district increased from 10,000 barrels to 11,540. Increases noted in both sections of this prolific area are partially due to completion of new wells and partially to continued successful application of gas lift systems to various properties by a number of companies engaged in artificial flow work.

Among the operators responsible for the increase in the Los Cerritos area are the Featherstone Preston organization, which completed its Los Cerritos No. 12 at the depth of 4850 feet for 120 barrels. A. J. Delaney brought in his Los Cerritos No. 12, producing 150 barrels from 4760 feet. Henderson Petroleum Corporation's Los Cerritos No. 23 was completed at 4799 feet and reported as good for 150 barrels. Geo. W. Johnston's Los Cerritos No. 1 was completed for 100 barrels at 4822 feet, and Jim O'Donnell's Los Cerritos No. 35 resulted in a 125 barrel well at 4845 feet. J. Oscar Smith's 75 barrel well, Los Cerritos No. 1 was completed from the upper zone at 2560 feet.

The production increase in the old field, of Signal Hill area, was aided by the completion of General Petroleum Corporation's K. & H. No. 7, which was drilled to a depth of 5100 feet and upon completion started flowing about 75 barrels but steadily increased to 150 barrels. The Hub Oil Company completed its MacMillan Petroleum Products well No. 4 for 100 barrels, also in the old field.

Walter P. Temple Oil Company's test for a third or super-sand at Los Cerritos has drilled more than 6000 feet and at present is showing hard gray sand so that it may be safely stated that nothing of promise is indicated by showing so far. On the eastern front of the old field, Signal Hill, Thompson and Snow are abandoning their test well which was drilled to a depth of 5100 feet and failed to pick up anything of promise, all indications pointing to an edge condition.

Wonder Well's Flow Steady

Marland Oil Company's discovery well at Seal Beach, Bixby No. 2, is still producing oil at the rate of 1800 barrels from its depth of 4227 feet and the continued production of this well no doubt acts as an incentive to further work in the area. Marland Oil Company has two wells drilling on the Bixby lease at present and one drilling on the Sellover-McGrath property. The Bixby wells are being drilled under contract by the Bell-Little Drilling Company, which completed the first Seal Beach well for Marland. The Standard Oil Company is drilling on No. 2 on its San Gabriel Improvement Company lease and has the rig up for its No. 3. The Associated Oil Company recently spudded in on the 40 acre tract adjoining the Marland Oil Company's famous Bixby property. Eight derricks now stand upon the marshy ground at Seal Beach, where a few weeks ago there was but one operation under way.

The Associated Oil Company has not yet any actual tests at its wildcat well at Cypress Avenue, which lies midway between Athens-Rsoecrans and the Baldwin Hills-Inglewood fields. This well was drilled to 4040 feet and set water string at about 3800 feet. The cement has been drilled out and the bailing test now underway will have something to do with determining the success or failure of the venture. As was stated in last week's report this well is of especial interest since it is located in an area where it is virtually surrounded by previously drilled dusters. The reported oil indications in this well have aroused very much interest on the part of operators in the Los Angeles Basin. The completion of a commercial producer in this territory will open up a new oil field in the Los Angeles producing territory and the test to be made in the next few days is therefore considered of much importance. It is generally conceded that the Associated has an excellent chance of bringing in a producer in the Cypress operation.

It is evident that in the opinion of the Union Oil Company, the well known Dominguez field, which is discovered, is capable of the development of more production. In following out its new drilling campaign the Union has four wells undergoing operations on its Callender property, and has just started its fifteenth well. The rig has been completed for Callender No. 15. Callender No. 3 has penetrated the oil sand at 3890 feet. Callender No. 4, a deeper test, is showing favorable indications at 4758 feet and Callender No. 5, at 5287 feet, a still deeper test, is showing streaks of oil sand and brown shale.

The Shell Company, which has developed splendid production on its Reyes lease in the same field, has another well nearing completion in its Reyes No. 32, which is now at a depth of 4220 feet.

Dominguez daily production is standing steadily at 21,000 barrels and has been practically constant at this figure in Los Angeles Basin production throughout the entire present year.

Elk Hills Lease Before Supreme Court

Washington, D. C.—The United States Supreme Court now has before it for decision the validity of the Elk Hills naval oil reserve lease negotiated by Edward L. Doheny with Albert T. Fall when the latter was Secretary of the Interior under the late President Harding. Arguments in the case were heard last week. Involved in the case is the disposition also of the oil storage station erected by Doheny at Pearl Harbor under the terms of the contract in litigation.

The case was brought before the Supreme Court by counsel for Doheny following the decision of the Federal court in California which ordered the contracts and leases canceled. The Government charged conspiracy in the making of the contracts and leases, while Doheny's lawyers defended them as having been made by Edwin Denby as Secretary of the Navy, with Fall acting only in an advisory capacity, and that the famous $100,000 loan made by Doheny to the latter was the act of a man helping a friend.

Frequently brought into the argument before the court was the Sinclair Teapot Dome lease, recently ordered canceled by the courts. The two cases are very similar, and Government counsel expect the decision in the Doheny case will have an important bearing on the Teapot Dome suit if Sinclair appeals from the recent decision.

Mid-Continent Speakers Discuss Public Relations

Meeting held at Tulsa with engineers; executive committeemen named

Tulsa, Okla.—The opportunity the oil industry has for gaining greater public confidence was presented by Glenn Griswold, editor of the Chicago Journal of Commerce, in his speech before the annual banquet of the Kansas-Oklahoma division of the Mid-Continent Oil and Gas Association here Tuesday night.

Mr. Griswold cited examples of how public utilities and the railroads have reaped benefits by making an appeal of fair play to the public.

Judson C. Wellver, director of public relations for the American Petroleum Institute, spoke on the general subject of the change in the uses of petroleum and how this change causes the problems of the industry to shift. His conclusions were that ultimately the petroleum industry will be left to solve its problems through the working of economic laws, rather than by legislative enactments.

W. C. Franklin, president of this section of the Mid-Continent Oil and Gas Association, presided as toastmaster in the absence of James A. Veasey, counsel for the Carter Oil Company. Illness prevented Mr. Veasey being present.

The banquet was attended by many members of the American Institute of Mining and Metallurgical Engineers, whose session was held in conjunction with the meeting of the Oil and Gas Association.

The annual meeting of the Kansas-Oklahoma division of the association was held Tuesday afternoon and directors were elected. The executive committee, which follows, will meet later to elect officials.

Executive Committee

Executive Committee, Kansas-Oklahoma division, 1927: W. C. Abrams, Noble Oil and Gas Company, Tulsa; G. D. Almen, Winona Oil Company, Tulsa; J. W. Bates, Reiter-Foster Oil Company, Tulsa; Guy Berry, Big Brother Oil Company, Independence, Kansas; Burdette Blue (ex-officio) Indian Territory Illuminating Oil Company, Bartlesville; Geo. Bole, Tulsa; J. H. Boyle, Chestnut and Smith, Tulsa; Robert H. Bradford, Eldorado, Kansas; John H. Brennan, Victor Oil Company, Tulsa; Frank Buttram, Buttram Petroleum Corporation, Oklahoma City; Louis Campbell, Magnolia Petroleum Company, Oklahoma City; H. H. Champlin, Champlin Refining Company, Enid; J. K. Cleary, Marland Oil Company, Ponca City; Fred Cook, Prairie Oil and Gas Company, Tulsa.

(1926, Kansas-Oklahoma Committee) H. N. Cole, Pure Oil Company, Tulsa; Burt H. Collins, Echo Oil Company, Tulsa; James K. Crawford, Brothers Oil Company, Tulsa; Wm. N. Davis, Bartlesville; J. C. Denton, Mid-Continent Petroleum Corporation, Tulsa; A. L. Derby, Derby Oil Company, Wichita, Kansas; Murray Doan, Tulsa; Geo. A. Dye, H. F. Wilcox Oil and Gas Company, Tulsa; T. T. Eason, Healdton Oil and Gas Company, Enid; W. W. Fleming, Mid-Kansas Oil and Gas Company, Tulsa; W. C. Franklin (ex-officio) Tidal Oil Company, Tulsa; Wirt Franklin, Ardmore; C. L. Freeland, Roland Oil Company, Bristow; E. J. Gorman, Twin State Oil Company, Tulsa; John L. Gray, Shaffer Oil and Refining Company, Tulsa; John S. Griffin, Sr., Griffin Production Company, Tulsa; R. A. Griffith, Sinclair Oil and Gas Company, Tulsa; H. B. Gutelius, Constinental Supply Company, Tulsa; C. C. Harmon, Nowata, Okla.; J. H. Hill, Texas Company, Tulsa; F. B. Howland, Kewanee Oil and Gas Hull Company, Tulsa; P. J. Hurley, Gilliland Oil Company, Tulsa; W. L. Jeffords, Chelsea, Okla.; R. C. Jones, Cushing; R. A. Josey, Josey Oil Company, Tulsa; John H. Kane, Phillips Petroleum Company, Bartlesville; Dana H. Kelsey, Prairie Oil and Gas Company, Independence, Kansas; W. L. Kistler, Kistler Oil and Gas Company, Tulsa; A. M. Landon, Independence, Kansas; E. B. Lawson, Nowata, Okla.; J. M. Lovejoy, Amerada Petroleum Corporation, Tulsa; Pat Malloy, Constant Refining Company, Tulsa; J. H. Markham, Jr., Tulsa, Okla.; E. W. Marland, Marland Companies, Ponca City; D. B. Mason, Tulsa; Henry McGraw, Gypsy Oil Company, Tulsa; J. J. McGraw, Exchange National Bank, Tulsa; C. L. McMahon, Okmulgee, Okla.; D. F. McMahon, Southwestern Petroleum Company, Tulsa; P. M. Miskell, Empire Refineries, Tulsa; E. H. Moore, Independent Oil and Gas Company, Tulsa; Charles F. Noble, Tulsa; Charles Page; Clyde Pape, Selby Oil and Gas Company, Tulsa; F. B. Parriott, Trans-Continental Oil Company, Tulsa; C. B. Peters, Peters Petroleum Company, Tulsa; Waite Phillips, Tulsa, Okla.; F. A. Pielsticker, Skelley Oil Company, Eldorado, Kansas; S. H. Price, Dixie Oil Company, Tulsa; W. R. Ramsey, Oklahoma City; E. B. Reeser, Barnsdall Oil Company, Tulsa; G. S. Rollin, Roxana Petroleum Corporation, Tulsa; Lee Scott, White Eagle Oil and Refining Company, Wichita, Kansas; R. C. Sharp, Oklahoma Natural Gas Company, Tulsa; J. J. Shea, Shea and Shea, Tulsa; W. G. Skelly, Skelly Oil Company, Tulsa; T. B. Slick, Slick Oil Company, Oklahoma City; J. W. Sloan, International Supply Company, Tulsa; Harry H. Smith, Mid-Continent Association, Tulsa; R. H. Smith, Philadelphia, Pa.; George Snedden, Lorraine Petroleum Company, Tulsa; H. R. Straight, Empire Companies, Bartlesville; C. W. Titus, Tulsa; Harry C. Tyrell, Pulaski Oil Company, Tulsa; James A. Veasey, Carter Oil Company, Tulsa; J. A. Vickers, Vickers Petroleum Company, Wichita, Kansas; P. J. Walker, Jr., Tulsa, Okla.; L. H. Wentz, Wentz Oil Corporation, Ponca City; Max Westheimer, Westheimer and Daube, Ardmore, Okla.; W. E. Wood, Kingwood Oil Company, Okmulgee, Okla.; C. J. Wrightsman, Wrightsman Oil Company, Tulsa.

Montana Wildcatting

Billings, Mont.—Operators in this part of the state are beginning to feel the effects of the generally improved marketing conditions and wildcatting is again on the increase. Some of the small proven and semi-proven structures are expected to see much development soon. The Big Lake field, where both gas and oil is produced, is active and additional wells will be drilled, it is thought. Operators in this field have improved marketing conditions for both gas and oil. Many idle structures in central Montana will receive a good play. Local organizations are again active and many tests of "home town" structures will be made.

Colorado Activities

Denver, Colo.—Development during the past month in Colorado was steady but far from spectacular. Initial production was small and no gas wells of consequence were completed. In the Fort Collins district, activities were centered around the dozen wells being drilled by the Union Oil Company of California. The company is finding the producing limits of the field by a series of edge tests. The gas pressure is not as great as formerly, but some of the wells are flowing consistently. The Iles and Craig fields as well as the Tow Creek structure will be drilled extensively during the next few months.

"When You Have a Problem to Solve, Stop and Smoke a Cigarette"

That's the philosophy of a superintendent who is getting results in drilling and production at Richfield

By WM. V. GROSS
Staff Representative

"GO slow and make haste!" That's the motto of the men who are putting down their wells in Richfield, California, in from one-half to three-fourths of the time consumed on similar operations by his neighbors.

Furthermore, H. H. Jones, assistant general manager in California, and Jim Patterson, superintendent for The Continental Oil Company at Richfield, seems to be getting more oil per foot of oil sand tapped than they ought to be getting, according to results obtained elsewhere in the same neighborhood.

Patterson is something of a philosopher, in addition to being a good field engineer. To a large extent the secret of success may be attributed to his philosophical attitude oward his work. This is shown by Patterson's prescription for solution of lease operation problems.

"When you have a difficult problem to solve on a well, and you have to act, and act fast, do you know what's the best thing to do? Don't do a blooming thing—until you've sat down with your driller and smoked a couple of cigarets. More than one oil well has been saved by taking time to smoke and talk it over."

So far as Mr. Patterson is concerned, Moses ought to have written one more commandment embracing the above sentiment. Although the superintendent didn't say so, the writer gathered it was the super's opinion that strict keeping of this eleventh commandment by oil operators would have done much toward eliminating the necessity for oil conservation boards.

Four things are responsible for efficient operation on the Continental's Kramer lease at Richfield, insofar as drilling and producing are concerned. The first cause is more or less abstract one, being that the local superintendent is given practically full rein to exercise his judgment in handling situations peculiar to drilling a well and keeping it on production. The second cause for efficiency may be attributed to a practice of using specially treated bits. Third, the operators have made use of an ingenuous home-made reamer which either drills a perfectly straight hole or no hole at all; and fourth, the operators have made a very minute study of each foot of sand in each well.

Letting Field Men Think.

Allowing a local superintendent to do some thinking for himself rarely may prove disastrous. As a rule, however, such practice on the part of producing companies gives birth to new ideas and has a tendency to create a more thorough understanding of each of the various localities in which it has production, or is attempting to obtain production. Ordinarily, the thoroughness is exploitation and the common sense in an organization's policy of lease development may be pretty fairly determined by an insight into an employee's opinion of the men at the helm of that organization. Inculcaitng self-respect and placing confidence in a field superintendent's judgment is mighty apt to bring out his best production ideas. Some of his theories may not work out beautifully on paper, but generally they are thought out along practical lines. And it is to be remembered that drilling wells on paper in headquarters many miles away from the well action and keeping them in condition by a series of orders issued from the same headquarters do not necessarily mean successful operation. Listen to the man on the job. His knowledge of lease conditions comes from experience and facts. His mental picture of conditions on a lease is drawn from things as he has found them. It is not drawn from things as they should be, according to geology and petroleum engineering theories.

After looking over the Continental's lease, the above policy in handling a field superintendent seems to be hard to beat. It is.

Mixture of Methods.

An explanation of the happy mixture of Mid-Continent and California methods in drilling that has given the Continental signal success in developing its holdings at Richfield, a region notorious for tough drilling and fishing jobs galore, may be of interest to advocates of both systems. And while it is generally admitted that a majority of the more progressive ideas contributed to petroleum engineering of late have been conceived by California operators, ideas of Rocky Mountain and Mid-Continent operators are at just as much a premium as they ever were. Less drilling time, straighter holes, minimized drilling costs and better ultimate results on this company's Kraemer lease are striking examples of what may be obtained by picking out the best in both Mid-Continent and California systems of operation and discarding that which is not particularly adaptable to a given locallity.

Specially Treated Fishtail Bit.

Use of a specially treated fishtail bit perhaps has contributed as much to

Illustration at right shows bit which has been treated with specially prepared hardening material

the Continental's repuation for being a "hole-maker" perhaps as any other feature of its operating methods. The treatment can be applied to any tempered fishtail bit by use of an acetylene torch and the proper mixture of welding material. A coating of the metal is applied to the cutting portion of the bit only.

The proportions of the constituents of the hardening material are a company secret and have not been divulged. Its application, however, requires little more time than that consumed in sharpening a fishtail by ordinary methods. And it means that the effectiveness of the bit practically is doubled. One fishtail thus treated was made to drill 198 feet, which is considerable hole at Richfield for any two ordinary fishtails.

It is obvious from a smattering of the virtues of this hardened bit that the tool is a great time saver, due to the fact that it does not have to be changed nearly so often as the plain tempered fishtail. Then, too, the hardening allows the bit to penetrate certain types of formation that would stop an ordinary fishtail and necessitate changing temporarily to a rock bit. These are direct advantages of the specially hardened fishtail.

Among those advantages incidental to its use is a considerable reduction in the rate of rig depreciation. Coming out of the hole subjects any rig to severe strain. Any piece of equipment that will lower the number of "round trips" per well completed is a direct means of rig preservation.

Special Reamer Used

C. R. ("Jim") Patterson said, "Go slow and make haste!" That's what happens to the Continental evidently when it sinks a hole on this basis: "Drill 200 feet. Then ream that 200 before you make another inch of hole."

A hole can not be reamed true with a tool that will allow the driller to spud by a short kink. Unfortunately, some of the commercial reamers allow this practice. But the "homemade" reamer used by the Continental is so constructed that it cannot be spudded by a kink. The only way the reamer can be forced by a kink is by first removing that kink from the hole. It either reams perfectly true or it doesn't ream at all.

The reamer, simple in construction, is the pet patent of H. H. Jones, assistant general manager of the Continental's activities in California. It is a versatile tool, the design allowing it to be fitted for any size hole without change in working principle. The tool, as now used in the Richfield area by the organization of its patentee and neighbor producers, is a replica of the accompanying illustration with the exception that two side-reaming cones have been installed on the reamer just above the bit shoulders.

Suspended from one end of a special drill collar of unusual length is an ordinary fishtail bit. At the other end of the long drill collar, a joint of drill pipe is attached by means of a tool joint. Close to the base of the special drill collar and just above the fishtail bit is secured a steel reducer with a left hand thread. The greater end of the reducer anchors the foot a joint of casing which slips over the drill pipe. The casing of the reamer, being practically the same diameter as the reamed hole, is that feature of the reamer which prevents its being spudded by any kinks or short curves in the hole. At the top of the casing is a slip bushing, permitting it to revolve freely around the drill pipe joint used as the main shaft of the reamer.

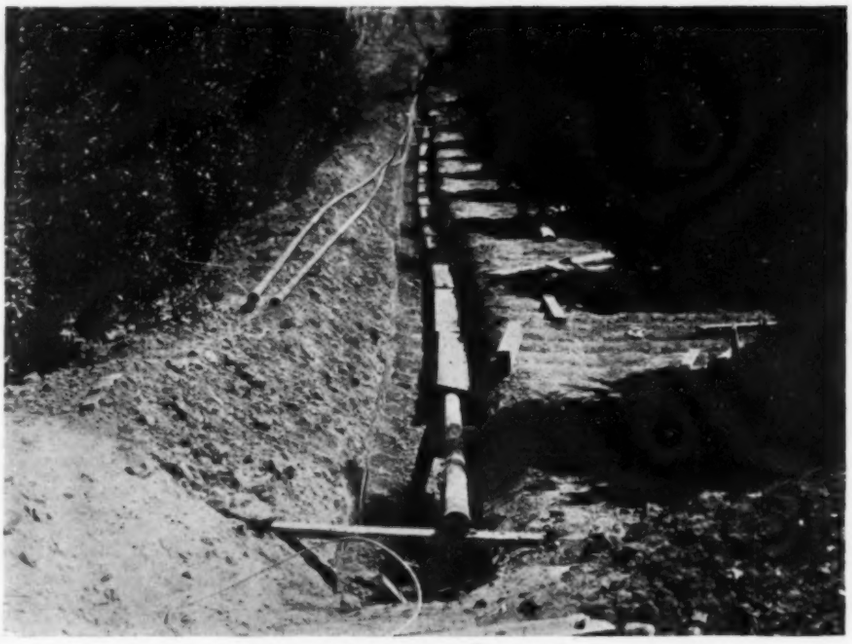


Illustration showing Johns-Manville asbestos coating on pipe line of Continental Oil Company at Richfield, California. Line is boxed and submerged after application of coating.

Eliminating Wasteful Cutting.

Because the above reamer guarantees a perfectly straight hole, the operators can substantially reduce the great tolerance usually allowed between the size of the hole drilled and the size of casing to be run. The greater the number of cubic feet of formation removed from a well, the greater the wear on the rig and the greater the number of hours consumed in removing that formation. In other words, where the common operator would drill a hole 20 inches in diameter to set 12½-inch casing, the Continental, assured that it has a straight hole, finishes up the hole with a 17-inch reamer. If the casing is set at 900 feet, according to ordinary methods, 900x100x3.14159, or 283,131 cubic feet must be removed. By reducing the amount of tolerance generally considered necessary in Richfield for setting 12½-inch casing, 900x72.25x3.1459, or 204,562 plus cubic feet must be removed. This means that in the matter of surface casing alone, accepted practice has been permitting the removal of 78,569 cubic feet too many. If a saving in excavation on the first string of pipe is this great, it is obvious that proportionate savings made on subsequent strings set in the same hole are going to materially cut down the drilling costs of that hole. The wholesale saving following this policy would effect on a lease embracing a number of reasonably deep wells is evident. Below is given a table showing the size hole drilled for a given size casing, together with the size drill pipe used for the job by the Continental in Richfield. This will vary considerably from the common practice there and in other territories where the nature of the drilling is much the same.

Casing size	Drll Pipe size	Hole diameter
12½	6	17
8-⅝	6	12
8-⅝	4	8

In drilling the above size hole for sizes of casing shown in the table, the first thought of an operator probably would be: "Does the saving in the amount of formation removed by the drill amount to enough to compensate the operator for additional expense he must go to for pipe guides?" If the drilling methods used were those now commonly practiced in Richfield and other tough territories in California, such a question would merit careful consideration. But when the hole is conditioned with an instrument that can not go into or come out of a hole until that hole is straight, the need of pipe guides is obliterated, just as is the element of fear of fishing jobs and frozen casing.

(Continued on page 54.)

PERSONAL MENTION-MEN YOU KNOW

Walter G. Swaney, president of the Kerotest Manufacturing Company, Pittsburgh, arrived in Houston early this week for a visit of several days. While in Houston he attended a luncheon given by Peden Iron & Steel Company to the Houston Purchasing Agents' Association, at which there were more than a dozen out-of-town guests.

Los Angeles offices of C. S. Thomas have been moved from the Bartlett Building to suite 805, Herman W. Hellman Building, 356 South Spring Street. Mr. Thomas, ("Sid"), is one of the best known geologists in California.

Ralph McCollum of McCollum Explorations, Inc., Houston, which is using a new geographical system worked out by Mr. McCollum, is now in Washington on business.

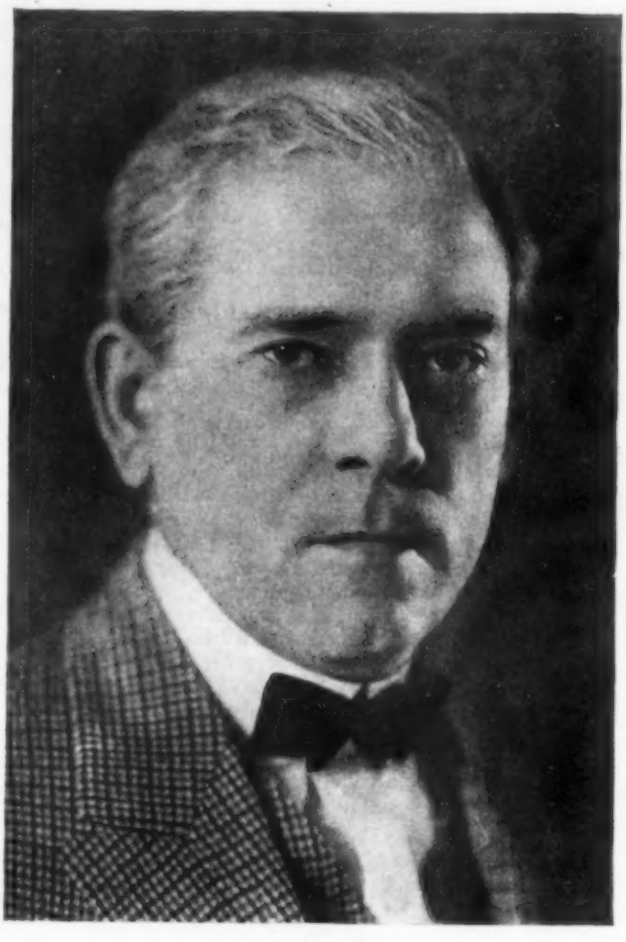
A. A. Hoyt, of the Richfield United Oil Company, Los Angeles, has returned from a tour of Arizona, where he went in the interest of the company. He reports a very interesting and profitable trip.

Mills Bennett, president of the Mills Bennett Production Company and the Swiftsure Petroleum Company, Houston, left early this week for Dallas, Fort Worth and West Texas points on a combined business and pleasure trip. While in North Texas he plans to spend several days at the Dallas fair.

Joseph M. Blocq, who served during the past summer in the scouting and leasing department of the Humble Oil & Refining Company, under Robert G. Carr, is now at Columbia Military Academy, Columbia, Tennessee, where he expects to finish next June.

R. L. Hamilton, of the Erie City Boiler Works, Erie, Pa., and whose company makes the Anthony Oil & Gas burner, was in Tulsa this week. Mr. Hamilton was greatly interested in lookng over the permanent exhibit of oil country goods and equipment.

E. Call Brown, formerly chief geologist for the California Petroleum Corporation, Los Angeles, who has resigned that position to enter the geological and petroleum engineering profession as an individual, has established offices at 1222 Bank of Italy Building.



R. C. SHARP

of Tulsa, Okla., who has been elected president and general manager of the Oklahoma Natural Gas Corporation, which has taken over the properties of the Oklahoma Natural Gas Company. Mr. Sharp was vice-president of the old company. The Oklahoma Natural Gas Corporation also has acquired the properties of the Kingwood Pipe Line Company, the Okmulgee Gas Company and the Southern Gas Company. The company serves 44 communities in Oklahoma, including Tulsa, Sapulpa and Okmulgee, which are served at retail, and Oklahoma City, Muskogee and Guthrie at wholesale. The company's pipe line mileage in the transmission and distributing system aggregates approximately 1,800. There are nine compressor stations and the gas supply is obtained from upward of 30 different natural gas fields.

William R. Johnson has been appointed representative for the American Schaeffer & Budenberg Corporation in the Tulsa territory. Mr. Johnson spent two weeks in New York visiting the factory and general offices there. He has been in his new position since the first of October, with headquarters still in Tulsa at 805 Mayo Building.

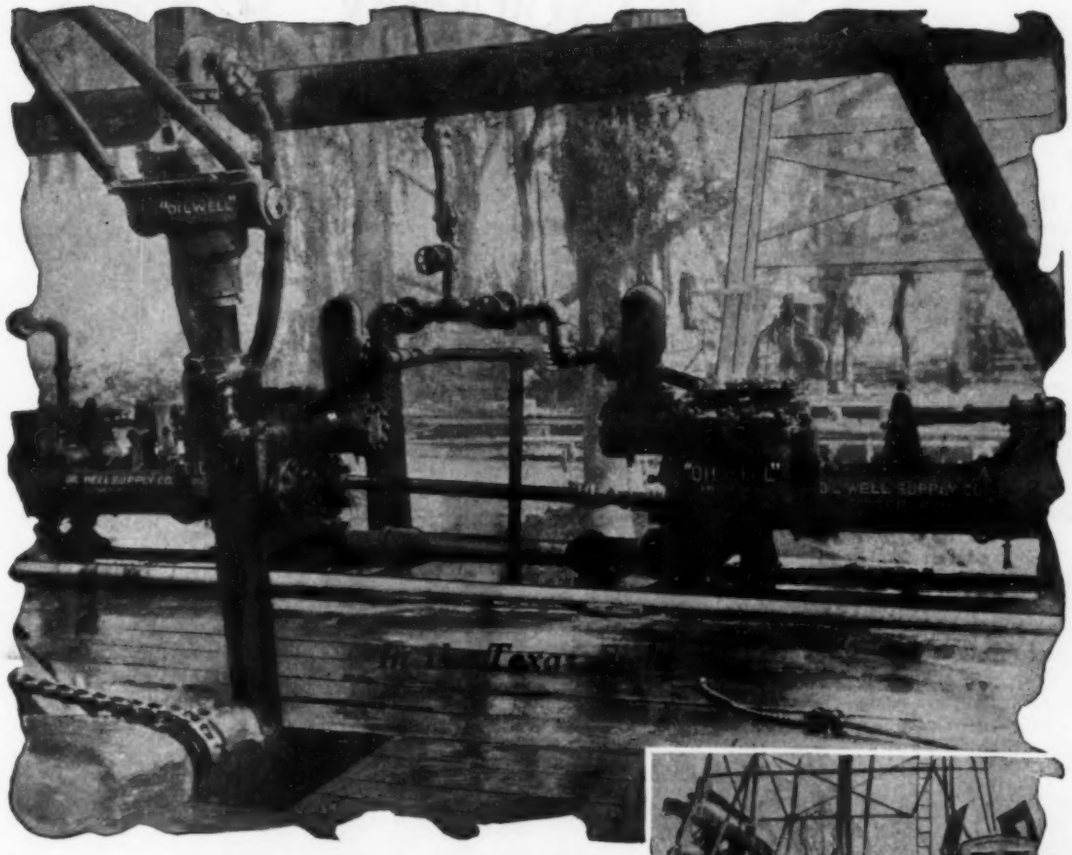
William M. Gross has been appointed in charge of the sales and service water softening and filtering equipment of the Graver Corporation for The Mid-Continent territory. Mr. Gross has been with the Graver Corporation for many years, and has had several years training as sales engineer. He also has served in estimating and field erecting departments. He comes from New York, where he had charge of Graver's office. Previous to going to New York he held the position of assistant manager of water softening sales. Mr. Gross is located at Graver's Mid-Continent office in 810 Atlas Life Building, Tulsa.

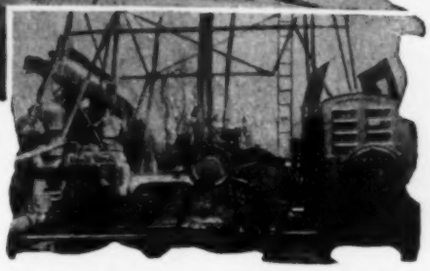
E. H. Rollestone, independent producer and organizer of the radio station KVOO at Bristow, Okla., has been appointed to the board of directors of the National Association of Broadcasters. He will preside over a district to be known as the central south. The district will be organized in St. Louis, October 21.

L. L. Foley has joined the geological staff of the Mid-Kansas Oil & Gas Company in Tulsa. He was formerly with the Barrington Development Company.

F. E. Rehm has been appointed assistant general field superintendent with headquarters at the Los Angeles office of the Shell Company, succeeding J. U. Stair, who has been made general field superintendent of the Company. Mr. Rehm has been associated with the Shell Company of California in various capacities since 1915.

Walter Elliott has been appointed superintendent of the Shell Company of California at Long Beach. Mr. Elliott was formerly associated with the Standard Oil Company in Los Angeles County and with the Western Union Oil Company at Santa Maria, California, coming with the Shell Company of California in March, 1923.





"OILWELL" Power Driven Imperial "Giant Mud Hog" Pump, in the Texas Field. 100 H.P. Waukesha 4 cylinder motor.

Good "MUD HOGS" are now made better-

Wherever Rotary Drilling is practiced, "OILWELL" "Mud Hog" Pumps have always been known as — *Good* "Mud Hogs."

In the Imperial "Mud Hogs" now being furnished, the Good "Mud Hogs" are made better because:—

1. The valve caps are held by means of studs.
2. The piston rod stuffing boxes are replaceable.
3. The liners are held in place by adjusting screws which permit tightening of lines from the outside of the cylinder heads.
4. The cradle has been strengthened.
5. More and larger studs are used.

The Imperial "Mud Hog" Pump is designed for a working pressure of 500 lbs. and the Imperial "Giant Mud Hog" Pump for a working pressure of 1,000 lbs.

Both pumps can be furnished in steam driven or power driven types.

Send for bulletins Nos. 62 and 64, or inquire at any of our 100 Branches.

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WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Approved Drilling and Production Practice in Oklahoma and Kansas*

By J. R. McWILLIAMS,
Skelly Oil Company, Tulsa, Oklahoma

The task of recovering most of the contents of an oil and gas reservoir economically presents many and varied problems. In order to attempt intelligently a solution to these problems, an understanding of fundamental physical laws is essential. As the pertinent facts needed in applying these laws to recovery problems are not readily obtainable, observation must be made and the data tabulated. Here, good judgment must be exercised, for at best the information is meager.

The engineer is well fitted to undertake the task of solving this problem. In my opinion, the decision on the part of some production executives to allow the engineer to cope with the oil recovery situation and other problems, is an outstanding example of improvement in production methods. The executive head must make this decision or the qualified engineer will be working under a severe handicap with the present system of supervising the production of oil and gas.

A qualified engineer should have not only the required technical training, but also enough field experience to enable him to understand the difficulties encountered in producing oil and gas. Such a man tactfully co-operating with the practical oil man can grealty improve present methods of oil recovery. The realization that nature's forces have not been efficiently controlled in past recovery of petroleum deposits has recently brought distinct improvement in production methods.

Papers are to be presented at this meeting discussing in detail improved methods of conserving gas in both flowing and pumping wells, and also methods of lifting oil after Nature's supply of gas has proved inadequate. The application of back pressure to producing oil wells has not, to my knowledge, been extensively applied in Oklahoma or Kansas up to the present time. Most of the flowing wells are allowed to flow through the casing until the rock pressure has been dissipated. However, some flowing wells have been tubed before the well stopped flowing through the casing. Recording pressure-gauges can be installed to study well performance.

Use of Gas Lift

It is interesting to note that the application of vacuum to pumping wells is becoming a questionable procedure, at least up until the time of rather small rock pressure. Gas-lift flowing of wells is becoming extensive in Oklahoma, especially in the districts producing from the deeper horizons. A visit to several of these installations leads one to conclusion that on the whole the machinery is running at over-capacity and the efficiency of the gas lift is rather low, certain installations excepted. However, when one considers that the gas-lift installations in Oklahoma and Kansas are less than one year old, the results accomplished are exceptional.

Use of Compressed Gas or Air

The practice of rejuvenating oil sands by the use of compressed gas or air is spreading in northern Okla-Oklahoma and eastern Kansas. On the whole the results are satisfactory. The time is not far distant when the gas from flowing wells will follow a cycle through the gasoline plants, be recompressed and forced back into the oil sands before the rock pressure has become disssipated.

General Practices.

The use of the combination rotary-cable tool drilling equipment is progressing northward through central Oklahoma. Most of the objection to rotary tools has been removed through the use of satisfactory core drills. Seamless casing is widely used for strings over 3000 feet.

Cementing water strings has decreased operating troubles. Calcium chloride and the commercial accelerators are used in cementing jobs. Long strings of pipe are floated into place and a satisfactory shoe with suitable valves is available, which does away with the risk involved in raising a string of casing off the casing seat while cementing. Time bombs are very satisfactory in shooting operations.

The wooden rig is practically extinct. Combination steel and wood, together with all-steel rigs, are used almost exclusively. Chain-driven sand reels are economical on wells below 3000 feet. Steel-constructed engine houses are becoming common and sometimes the belt house is of this construction. Well braced jack posts and sampson posts are securey set in concrete foundations in many installations. Steel pitmans and bull wheels are very common, with fewer steel walking beams and band wheels.

Gas or oil engines are economical and satisfactory on drilling wells in those areas where fuel or water is scarce. A portable pump directly connected to a gasoline motor is widely used for small intermittent pumping jobs. Efficient burners are used on drilling boilers and sometimes exhaust steam is passed through a heat interchanger to raise the temperature of the boiler feed-water.

Pumping and Pulling Equipment.

A pumping unit using a reduction gear between the prime mover and the crank increases mechanical efficiency considerably. A chain hoist is used for pulling operations, mostly in connection with the electric motor. Wells have been drilled-in with this equipment. A well designed counter-balance is standard equipment on one particular unit.

The enclosed type of pumping engine with counter-balanced crank shaft and force-feed lubrication is available. Water softener is used to a great extent in circulating water for engines. Clutch troubles are decreasing with better designed equipment. One manufacturer has a satisfactory clutch on on the market that does away with reverse gears. The use of tractors for pulling rods and tubing has decreased

*Paper read before A. I. M. M. E. meeting, Tulsa, October, 1926. Copyright, 1926, by the American Institute of Mining and Metallurgical Engineers, Inc.

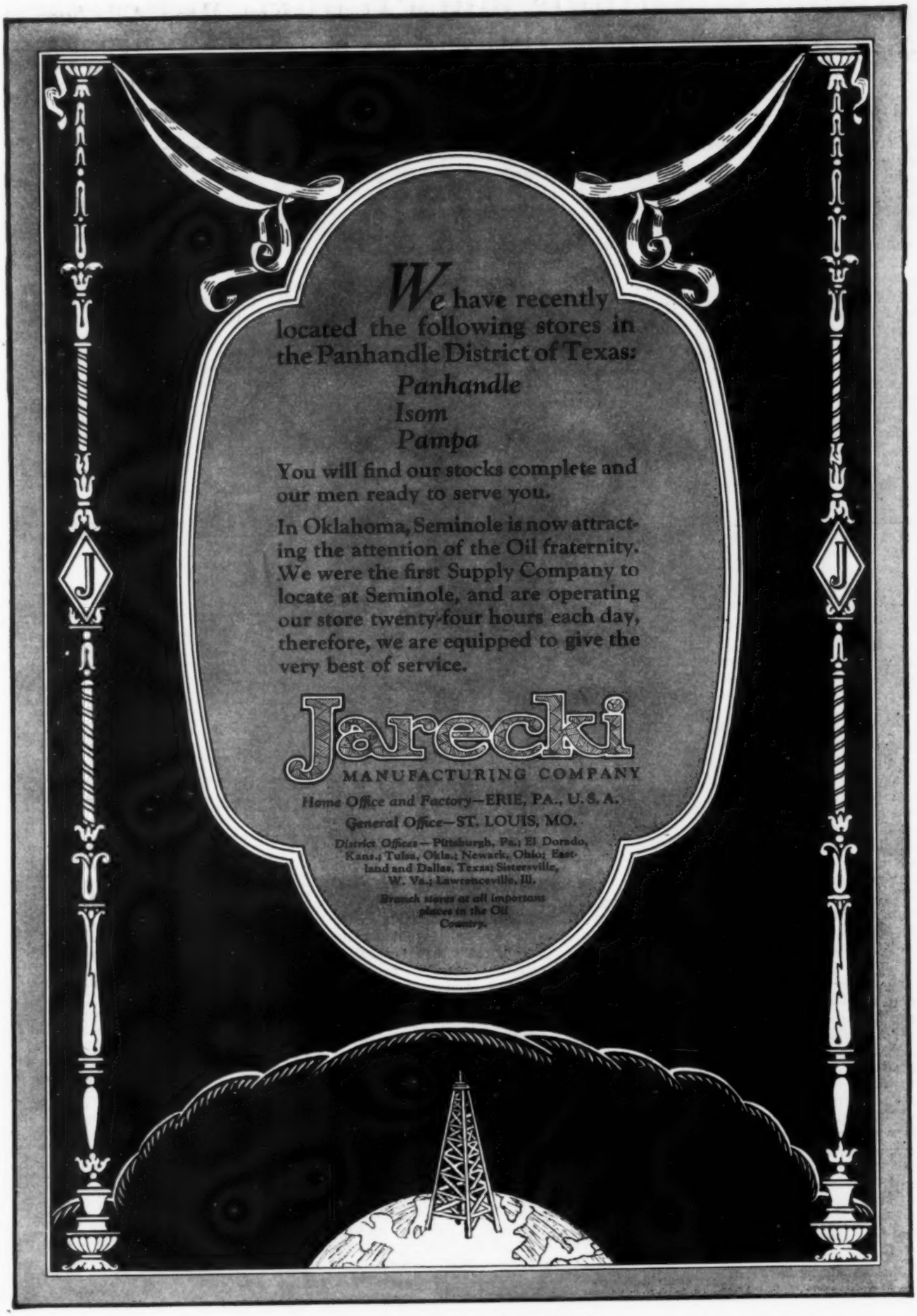
Developments and Operations in the Panhandle Field

(Continued from page 28.)

as done in these tests, tends to give a supersaturation of paraffins. This is evidenced in the difficulty of checking pour tests and viscosities when the oil has stood in the instrument for different time intervals. Paraffin wax requires hours and even days to crystallize out. In the field, the slow crystallization of paraffin takes several days.

Hence it would seem, in the preliminary tests, impractical to try to heat a crude oil below the cracking temperature in order to prevent paraffin from crystallizing out in the tanks or pipe lines. It would have a desired temporary effect, but its work is questionable if the oil is going to be long in transit where it will have to stand sometimes for several hours.

As so many problems confront the operators in the Panhandle field, any definite method of procedure cannot be outlined now. Until the field has been worked for some time and experiments have been made, more or less of a cut-and try program will be the order in pumping throughout the field, while we seek some efficient and economical operating methods to produce oil and show a column on the right side of the ledger.


We have recently located the following stores in the Panhandle District of Texas:
Panhandle
Isom
Pampa
You will find our stocks complete and our men ready to serve you.
In Oklahoma, Seminole is now attracting the attention of the Oil fraternity. We were the first Supply Company to locate at Seminole, and are operating our store twenty-four hours each day, therefore, we are equipped to give the very best of service.
Jarecki
MANUFACTURING COMPANY
Home Office and Factory—ERIE, PA., U. S. A.
General Office—ST. LOUIS, MO.
District Offices—Pittsburgh, Pa.; El Dorado, Kans.; Tulsa, Okla.; Newark, Ohio; Eastland and Dallas, Texas; Sistersville, W. Va.; Lawrenceville, Ill.
Branch stores at all important places in the Oil Country.

engine and clutch troubles markedly. The time required for pulling operations has also been materially decreased by the use of tractors.

Several hydraulic long-stroke pumping units are in use in Oklahoma and Kansas. Favorable results are reported. An oval-gear long-stroke pumping attachment has been recently put on the market. As yet it has not been used extensively, but the design affords control of acceleration during the proper part of the pumping stroke. This factor has a great effect on the life of pumping equipment.

A counter-balance attached to the band wheel is commanding attention, especially where installed on deep pumping wells. Here pumping equipment is taxed to capacity and an effective counter-baance is absolutely essential in consistently handling large volumes of fluid. Rod hangers have not been used extensively but their use is increasing. A satisfactory tubing bleeder is on the market.

Band-wheel power installations are pumping wells over 3000 feet deep. The counter-balanced jack with a vertical pull on the polish rod is effective on this type of well. The fluid-packed pump, although not possessing a high volumetric efficiency, yields results on wells that really should be cleaned out or that have floating sand.

Welded Stock-Tanks.

The purchase of oil on a gravity basis has been an important factor toward conservation. Welded stock-tanks are yielding some excellent results in the retention of the gravity of oil. The big advantage of welded tanks over bolted tanks is that they stay tight. Two other advantages are portability and increased thickness of metal per dollar investment. Welded tanks are limited in size on account of portability and, therefore, are not adaptable for the total stock-tank installation on flush production. The usual procedure is to install enough welded tanks to care for the estimated future settled production and use large bolted tanks for the remainder of the flush oil.

Treating Emulsified Oil

A recent installation for treating emusified oil has yielded some surprising results. The oil and water are pumped through a boiler where the temperature is kept constant by a heat controller. The wash tank, settling tanks and pipe line from the boiler to the tanks are insulated. Insulating this equipment enables a reduction in the temperature required for treating from 180 degrees to 120 degrees F. The temperature of the oil in the settling tank is constant regardless of weather conditions. The result is clean oil at a lower temperature.

The gas that is boiled out of the oil, due to the necessity of heating, is collected in the welded treating tanks. These tanks will withstand sufficient pressure to force the oil and gas through a system of coils where the cooled oil reabsorbs the rich gas vapors driven off by the heat. The salt water sprayed over the coils comes from the wells and is separated at the first receiving tank.

The oil is discharged into the stock tanks through submerged nipples. Gauge glasses are installed on the sides of the tanks with a suitable gauge pole arrangement so that the pumper can obtain his daily gauge or "top out" a tank without opening it, which would intermittently release the gas vapors in the tanks. The gravity of the oil on this particular installation has been increased from 2 to 3 degrees and the oil is practically clean.

Production Records

Excellent results are being obtained by the inauguration of a system of pertinent production records. These records are extremely valuable in reflecting operations for the supervising heads. For instance, one company keeps a graph, platted daily, of the oil, gas, gas factor and gravity of each tank of oil run from each individual property. At a glance one can grasp the situation and have a comparison of records over a period of time. A down-time report showing the number of hours a well is off production and the specific cause of interruption is required. This information is totaled semi-monthly and posted to a summary. A marked deviation from the average down time for any specific reason is cause for investigation and remedial measures.

A replacement record on equipment is beneficial in determining faulty products. Several of the major companies have equipment standardization programs under way.

Employe Welfare.

The welfare of employees is receiving more and more attention. Safety-first bulletin boards are in evidence on many leases, as in manufacturing plants. Competent men circulate among the various districts of their company lecturing to the workmen on the merits of safety-first policies.

Several of the companies require a medical examination before a man is employed. This practice benefits the employee as well as the company. Larger dwelling houses equipped with bathing facilities are increasing. Schools are provided in remote districts. Bonuses, vacations, insurance and stock at reduced prices are often available for deserving employees.

To those who are thoroughly familiar with the production in the oil industry, evidently a progressive program of determining and practicing more efficient and conservative methods of producing oil is being universally adopted.

New Deep Oil Area Found in Wyoming

Casper, Wyo. — Midwest Refining Company has opened up a new light oil field in Wyoming, having completed a 50-barrel well on section 1-18-78, in what is known as the Dutton Creek structure. A formation thought to be the Muddy sand, was found at 4875 feet and a commercial well resulted after drilling a few feet into the sand.

A careful study of the history of the new field shows that operators have shunned the structure for years because they thought the producing sands were entirely out of reach of the drill. Independent geologists made a careful study of the field and finally found that the outcroppings showed the possible producing sands to be shallower than formerly anticipated. Midwest interests started the well in 1925 with a 20-inch hole. Drilling has been slow. A string of small casing was run to the top of the sand before the well was completed. The hole is in excellent shape. The sand was drilled through at 4905 feet.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.

Of The OIL WEEKLY, published weekly at Houston, Texas for October 1, 1926.

State of Texas
County of Harris ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared A. L. Burns, who, having been duly sworn according to law, deposes and says that he is the Manager of The OIL WEEKLY and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, R. L. Dudley, Houston Texas; Editor, S. W. Robinson, Houston, Texas; Associate Editor, J. Kent Ridley, Houston, Texas; Manager, A. L. Burns, Houston, Texas.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and address es of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

The Gulf Publishing Company, a corporation, Houston, Texas. James Anderson, Houston, Texas. R. L. Blaffer, Houston, Texas. Mrs. S. C. Blaffer, Houston, Texas. A. L. Burns, Houston, Texas. J. F. Carter, Jr., Tulsa, Okla. D. N. L. Dudley, Goose Creek, Texas. R. L. Dudley, Houston, Texas. W. S. Farish, Houston, Texas. Dr. J. L. Gross, Houston, Texas. H. R. Hughes, Houston, Texas. Chas. H. Lane, Houston, Texas. Wallace E. Pratt, Houston, Texas. J. Kent Ridley, Houston, Texas. Spencer W. Robinson, Houston, Texas. C. N. Scott, Houston, Texas. R. S. Sterling, Houston, Texas. John R. Suman, Houston, Texas. O. R. Waller, Chicago, Ill. E. E. Watts, Houston, Texas. C. F. Williams, Humble, Texas.

3. That the known bondholders, mortgages, and security holders owning or holding 1 per cent or more of total amount of bonds, mortages, or other securities are: (If there are none, so state.) Jas. Anderson, Houston, Texas. H. C. Weiss, Houston, Texas. R. L. Blaffer, Houston, Texas. W. S. Farish, Houston, Texas. John Hammon, Houston, Texas. Jno. R. Suman, Houston, Texas. Mrs. Chas. H. Lane, Houston, Texas. Mrs. A. C. Schneider, Houston, Texas. R. S. Sterling, Houston, Texas.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholder or security holder appears on the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

A. L. BURNS, Manager.

Sworn to and subscribed before me this 4th day of October, 1926.

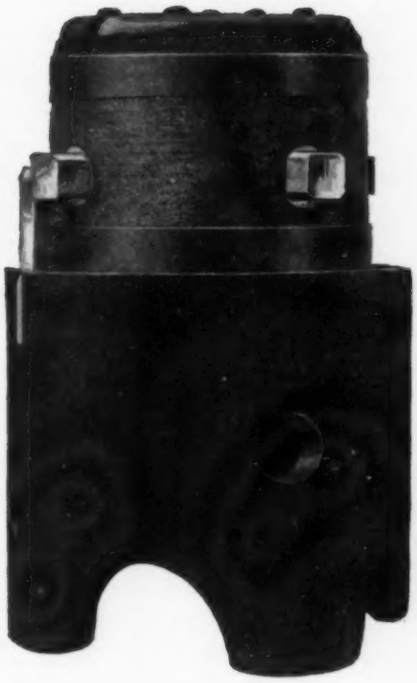
(SEAL) J. KENT RIDLEY, Notary.
(My commission expires June 30th, 1927.)

The LARKIN Improved SAND PUMP

(Patented)

Manufactured at Butler, Penna.

Furnished with either or both of these bottoms



LARKIN REGULAR BOTTOM

LARKIN BIT BOTTOM

—is giving satisfaction everywhere

The LARKIN Improved Sand Pump is flexible, in that it operates success fully at all depths—under all conditions. Under normal conditions this Pump will, when equipped with its REGULAR Bottom, bring out the sand and sediment in record time.

Where cavings have packed hard, the Larkin Bit Bottom may be used. It will break up the hard formations efficiently, and so quickly pass the material through to the pump, that the pump may be operated at full capacity without being delayed to any extent, even by the worst conditions encountered. If you want to be prepared to meet the toughest pumping jobs with the best pump, get the Larkin and have it equipped with either the Regular or Bit Bottoms.

The LARKIN Improved Sand Pump will clean out more wells, for more years, than any sand pump made. Its Barrel is of "NATIONAL" Seamless Steel Tubing. In every detail of construction, the materials used are unexcelled for quality.

There is no better equipment than this Larkin Leader. It has been made at Butler Penna., for years. It is still made there and there only. Even more today than when the Eastern fields were young, it is the leading sand pump on the market.

Write for Circular and Price List

LARKIN & CO., Butler, Penna.

AVERAGE DAILY PRODUCTION FOR U.S.

United States Daily Average Production by Weeks

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

Week Ending	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Total
February	450,037	101,937	245,989	91,550	45,090	169,676	99,000	98,412	605,250	1,909,637
March	454,762	103,300	260,262	92,712	48,787	165,312	97,625	102,325	604,500	1,929,562
April	467,175	101,825	263,612	88,812	50,562	169,824	100,875	106,675	600,000	1,947,387
May	463,750	105,690	277,700	94,550	58,150	175,430	105,700	112,300	602,720	1,995,990
June	456,450	107,637	302,187	89,912	60,412	167,887	106,250	112,925	606,925	2,013,187
July	456,920	110,320	336,600	114,760	57,460	161,870	104,700	108,520	613,940	2,062,470
August	465,137	111,600	381,560	161,237	56,787	157,375	108,350	110,737	609,725	2,162,662
September	465,387	113,037	402,212	175,512	56,575	154,037	110,125	105,825	598,100	2,180,862
October 2	470,500	115,150	413,250	174,400	58,200	151,100	110,000	101,650	600,000	2,194,250
October 9	474,950	114,800	430,350	167,450	57,900	150,150	109,500	96,600	602,500	2,204,200
Increase over past week	4,450	.....	17,100	.....	.....	.....	.....	.....	2,500	9,950
Decrease over past week	.....	350	.....	6,950	300	950	500	5,050	.....	.....

Texas

NORTH

	Oct. 9	Oct. 2
Burkburnett	13,200	12,900
Electra	16,300	15,950
Iwoa Park K-M-A	4,000	4,000
Wilbarger	13,850	13,650
Hutchinson County	131,900	116,050
Panhandle Misc.	10,350	9,900
Petrolia	650	600
Archer County	32,300	31,850
Montague County	6,850	6,300
Others	800	800
Totals	230,200	212,000

EAST CENTRAL

Mexia	11,200	11,250
Currie	750	800
Richland	1,350	1,350
Corsicana-Powell	24,250	25,450
Wortham	6,050	6,100
Nigger Creek	12,200	12,850

WEST CENTRAL

Stephens County	10,800	10,950
Eastland County	5,500	5,800
Desdemona	1,700	1,750
Young County	6,850	6,550
Palo Pinto County	400	400
Calahan County	4,200	4,200
Shackelford County	8,800	8,500
Reagan County	29,100	29,200
Brown County	12,250	11,500
Coleman County	1,650	1,850
Crane-Upton Counties	12,450	12,550
Mitchell	3,800	3,850
Others	2,800	1,400
Totals	100,300	98,500

SOUTHWEST

Laredo District	17,100	17,350
Luling	20,750	21,250
Somerset	1,950	2,000
Lytton Springs	3,650	3,700
Piedras Pintas	50	100
Others	550	550
Totals	44,050	44,950
Totals, Texas (outside Gulf Coast	430,350	413,250

GULF COAST

Goose Creek	9,950	9,400
Hull	21,450	20,750
Saratoga	1,150	1,150
Blue Ridge	1,600	1,600
Damon Mound	850	1,300
Batson	1,600	1,600
West Columbia	8,850	8,800
Humble	3,850	3,850
Pierce Junction	2,100	1,900
Sour Lake	8,700	8,250
Spindletop	79,800	85,750
Orange County	7,150	7,550
Edgerly	1,000	1,000
Evangeline	1,050	1,100
Vinton	6,000	6,200
Lockport	2,900	4,600
South Liberty	4,500	4,050
Big Creek	1,300	900
Boling	2,400	2,650
Others	1,700	1,950
Totals	167,450	174,400

Oklahoma

North Braman	15,150	12,750
South Braman	6,800	6,300
Blackwell	4,150	4,150
Hubbard	2,800	2,850
Thomas	1,950	1,950
Tonkawa	36,900	38,350
Garber	26,100	26,600
Burbank	46,800	46,750
Osage (outside Burbank)	34,500	34,500
Watchorn	4,150	4,300
Cushing	21,500	21,500
Yale Jennings	13,800	14,200
Davenport	5,250	5,700
Bristow Slick	27,300	27,350
North Okmulgee	17,550	17,550
Lyons Deaner	2,950	3,950
Stroud	2,000	2,050
Cromwell	15,300	15,350
Papoose	9,550	10,000
Wewoka	27,050	26,650
Duncan District	7,400	7,400
Graham	10,400	10,350
Fox	6,250	6,250
Healdton	14,700	14,850
Hewitt	11,200	11,400
Seminole	34,950	30,000
Others	67,500	67,450
Totals	474,950	470,500

California

Santa Fe Springs	47,500	47,500
Long Beach	93,500	93,500
Hunting Beach	50,000	48,000
Torrance	27,000	27,000
Dominguez	21,000	22,000
Rose Crans	13,000	13,000
Inglewood	41,000	41,000
Midway-Sunset	94,000	94,000
Ventura Avenue	50,500	50,000
Others	165,000	164,000
Total	602,000	600,000

Kansas

Florence Covert	1,950	2,000
Peabody Elbing	4,200	4,200
Eldorado Towanda	13,750	13,800
Augusta Fox-Bush	4,900	4,950
Rainbow Bend	3,500	3,750
Russell	4,500	4,800
Greenwood County	44,950	45,300
Others	37,050	36,350
Totals	114,800	115,150

North Louisiana

	Oct. 9	Oct. 2
Homer	5,600	5,650
Haynesville	9,200	9,400
Caddo Light	9,750	9,900
Caddo Heavy	2,450	2,850
Desoto Red River	4,000	4,000
Elm Grove	500	550
Bellevue	2,100	2,100
Cotton Valley	7,600	7,300
Urania	16,700	16,450
Totals	57,900	58,200

Arkansas

El Dorado	6,850	6,850
Smackover Light	14,150	14,250
Smackover Heavy	117,850	118,600
Stephens	1,600	1,700
Nevada	1,900	1,900
Lisbon	7,800	7,800
Totals	150,150	151,100

Mountain States

WYOMING

Salt Creek	43,150	46,500
Grass Creek	3,100	3,050
Elk Basin	800	750
Big Muddy	3,300	3,350
Lost Soldier	5,050	5,150
Rock River	2,600	2,750
Hamilton Dome	1,200	1,150
Teapot Dome	250	1,500
Lance Creek	1,050	1,050
Others	2,350	2,250
Total	62,850	67,500

MONTANA

Cat Creek	2,650	2,700
Sunburst	18,000	18,000
Others	200	200
Totals	20,850	20,900

COLORADO

Moffats (Craig)	3,500	3,550
Fort Collins	3,350	3,550
Florence	500	500
Others	750	900
Total	8,100	8,500

NEW MEXICO

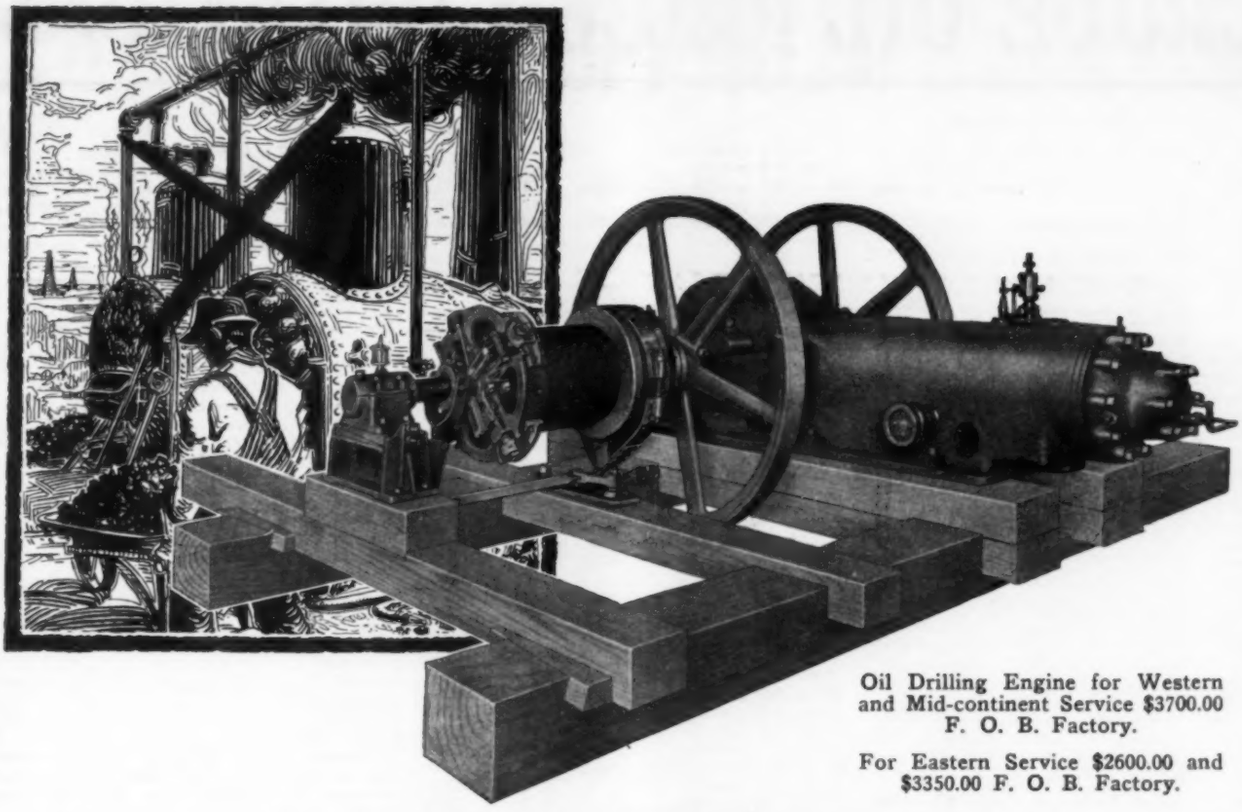
Artesia	3,000	3,000
Hogback	750	700
Rattlesnake	1,050	1,050
Total	4,800	4,750
Total Mt. States	96,600	101,650

EASTERN STATES

Including Illinois, Indiana, Ohio Pennsylvania, West Va., Kentucky and New York	109,500	110,000

PRODUCTION SUMMARY

East of the Rockies	1,505,100	1,492,600
United States	2,204,200	2,194,250



Oil Drilling Engine for Western and Mid-continent Service $3700.00 F. O. B. Factory.

For Eastern Service $2600.00 and $3350.00 F. O. B. Factory.

Here is a Texas Driller Who Found it Cheaper to buy a Franklin than Repair His Boiler!

"In the McCamey district in Texas I have completed two wells to the twenty-two hundred foot sand with the Franklin Engine in twenty-four days each. In the Fort Stockton, Texas district I have a well down to forty-five hundred feet, having drilled it with steam, but am moving in a Franklin Valveless Oil Engine there to get away from repair bills on the boiler."

And this is but one of the many reasons why drillers find it more satisfactory and **profitable** to switch to Franklin Valveless Oil and Gas Drilling Engines.

FRANKLIN VALVELESS ENGINE COMPANY

FRANKLIN, PENNA.

Distributed by

Atlas Supply Company
Muskogee, Okla., and Branches

New Martinsville Supply Company
New Martinsville, W. Va.

Wooster Tool & Supply Company
Wooster, Ohio

Bradford Sales Company
Bradford, Penna.

International Supply Company
Tulsa, Okla., and Branches

Atha Supply Company,
Zanesville, Ohio

Washington Engine & Pump Co.
Washington, Penna.

McEwen Brothers
Bolivar, N. Y.

The American Tank Company of Colorado,
Casper, Wyoming

THEY BEAT STEAM AT EVERY TURN

CRUDE OIL PRICE QUOTATIONS

Crude Price Changes

Oct. 8.—Ohio Oil Company has posted a 10-cent advance in the price of Kevin-Sunburst, Montana crude, making the posted price now $1.35 per barrel.

Current Postings

EASTERN STATES

	Oct. 13 1926
New York Transit	3.40
Bradford District	3.40
National Transit	3.30
Southwest	3.30
Eureka	3.25
Macksburg	3.05
Gaines	2.85
Somerset medium	2.50
Somerset light	2.65
Cabell	2.40
Ragland	1.25
Corning	2.55
Keister	2.30

CENTRAL STATES

Illinois	2.37
Indiana	2.25
Lima	2.48
Plymouth	1.90
Princeton	2.37
Waterloo	1.35
Wooster	2.55

WESTERN KENTUCKY

Posted by Indian Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, Cumberland and Monroe Counties

36 and above	2.05

MID-CONTINENT

	Prairie Sinclair* Texas Gulf	Magnolia
Below 28	...	1.30
28 to 28.9 gravity	1.65	1.65
29 to 29.9 gravity	1.73	1.73
30 to 30.9 gravity	1.81	1.81
31 to 31.9 gravity	1.89	1.89
32 to 32.9 gravity	1.97	1.97
33 to 33.9 gravity	2.05	2.05
34 to 34.9 gravity	2.13	2.13
35 to 35.9 gravity	2.21	2.21
36 to 36.9 gravity	2.29	2.29
37 to 37.9 gravity	2.37	2.37
38 to 38.9 gravity	2.45	2.45
39 to 39.9 gravity	2.53	2.53
40 to 40.9 gravity	2.61	2.61
41 to 41.9 gravity	2.69	2.69
42 to 42.9 gravity	2.77	2.77
43 to 43.9 gravity	2.85	2.85
44 to 44.9 gravity	2.93	2.93
45 to 45.9 gravity	3.01	3.01
46 to 46.9 gravity	3.09	3.09
47 to 47.9 gravity	3.17	3.17
48 to 48.9 gravity	3.25	3.25
49 to 49.9 gravity	3.33	3.33
50 to 50.9 gravity	3.41	3.41
51 to 51.9 gravity	3.49	3.49
52 and above	3.57	3.57

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran, Somerset, Big Lake and Nocona crude

	Somerset (Grayburg)	Humble O. & R. Co.* Texas Co.
28 to 28.9 gravity	1.15	1.65
29 to 29.9 gravity	1.25	1.73
30 to 30.9 gravity	1.31	1.81
31 to 31.9 gravity	1.39	1.89
32 to 32.9 gravity	1.47	1.97
33 to 33.9 gravity	1.55	2.05
34 to 34.9 gravity	1.63	2.13
35 to 35.9 gravity	1.71	2.21
36 to 36.9 gravity	1.79	2.29
37 to 37.9 gravity	1.87	2.37
38 to 38.9 gravity	1.95	2.45
39 to 39.9 gravity	2.01	2.53
40 to 40.9 gravity	2.07	2.61
41 to 41.9 gravity	2.13	2.69
42 to 42.9 gravity	2.19	2.77
43 to 43.9 gravity	2.25	2.85
44 to 44.9 gravity	2.31	2.93
45 to 45.9 gravity	2.31	3.01
46 to 46.9 gravity	2.31	3.09
47 to 47.9 gravity	2.31	3.17
48 to 48.9 gravity	2.31	3.25
49 to 49.9 gravity	2.31	3.33
50 to 50.9 gravity	2.31	3.41
51 to 51.9 gravity	2.31	3.49
52 and above	2.31	3.57

Corsicana Heavy $1.25 per barrel, posted by Magnolia.

*Until further notice, Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes purchased by the Humble Oil and Refining Company, of a gravity lower than 28 degrees will be paid for with a corresponding decrease of eight (8) cents per barrel for each lower degree of gravity.

SOUTH TEXAS

	Oct. 13 1926
Mirando	1.25

GULF COAST

All fields except Spindletop

Grade "A" all companies	1.40
Grade "B"	1.50
Gulf Coast Light Oil, Below 25	1.40
25 to 25.9	1.45
26 to 26.9	1.50
27 to 27.9	1.55
28 to 28.9	1.60
29 to 29.9	1.65
30 to 30.9	1.70
31 to 31.9	1.75
32 to 32.9	1.80
33 to 33.9	1.85
34 to 34.9	1.90
35 to 35.9	1.95
36 to 36.9	2.10
37 to 37.9	2.15
38 to 38.9	2.20
39 to 39.9	2.25
40 and above	2.30

*Humble Oil and Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crude above 35 is $1.95 per barrel.

SPINDLETOP LIGHT

Posted by Gulf Pipe Line Company, Humble Oil and Refining Company, Magnolia and Texas Company. Other companies buying Spindletop crude on regular Gulf Coast basis as shown above.

Below 25 gravity	*1.25
25 to 25.9	1.30
26 to 26.9	1.35
27 to 27.9	1.40
28 to 28.9	1.45
29 to 29.9	1.50
30 to 30.9	1.55
31 to 31.9	1.60

*The Texas Company does not post prices on this grade.

(Continued on page 54)

California Crude Oil Prices at the Well

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated)

Gravity (degrees)	Signal Hill	Huntington Beach	Inglewood	Olinda-Brea Canon	Rosecrans Dominguez	Torrance	Richfield	Whittier	La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall	Midway-Sunset Elk Hills	McKittrick	Lost Hills	Coalinga	Kern River	Wheeler Ridge
14-14.9	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15.9	.87	.87	.87	.87	..	.87	.87	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75	.75
16-16.9	.90	.90	.90	.90	..	.90	.90	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75	.75
17-17.9	.94	.94	.94	.94	..	.94	.94	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75	.75
18-18.9	.98	.98	.98	.98	..	.98	.98	.86	.86	.86	.86	..	.75	.75	.75	.75	.75	.75	.75
19-19.9	1.04	1.04	1.04	1.04	..	1.04	1.04	.87	.87	.87	.87	..	.75	.75	.75	.75	.75	.75	.75
20-20.9	1.10	1.10	1.10	1.10	..	1.10	1.10	.89	.89	.89	.90	..	..	.82	..	.82	.79	..	.78
21-21.9	1.16	1.16	1.16	1.16	..	1.16	1.16	.91	.91	.91	.98	..	..	.90	..	.90	.86	..	.81
22-22.9	1.22	1.22	1.22	1.22	..	1.22	1.22	.94	.94	.94	1.06	..	..	1.00	..	1.00	.93	..	.85
23-23.9	1.28	1.28	1.28	1.28	..	1.28	1.28	..	..	.97	1.14	..	..	1.11	..	1.11	1.00	..	.89
24-24.9	1.34	1.34	1.34	1.34	1.34	1.34	1.34	..	..	1.01	1.22	1.02	..	1.22	..	1.22	1.07	..	.93
25-25.9	1.40	1.40	1.40	1.40	1.40	1.40	1.40	..	..	1.05	1.30	1.08	..	1.33	..	1.33	1.14	..	.97
26-26.9	1.46	1.46	1.46	1.46	1.46	1.46	1.46	..	..	1.09	1.38	1.16	..	1.44	..	1.44	1.21	..	1.01
27-27.9	1.52	1.52	1.52	1.52	1.52	1.52	1.52	..	..	1.13	1.46	1.24	..	1.55	..	1.55	1.28	..	1.05
28-28.9	1.58	1.58	1.58	1.58	1.58	1.58	1.58	..	..	1.17	1.54	1.32	..	1.66	..	1.66	1.35	..	..
29-29.9	1.64	1.64	..	1.64	1.64	..	1.64	..	..	1.21	1.62	1.40	..	1.77	..	1.77	1.42	..	..
30-30.9	1.70	1.70	..	1.70	1.70	..	1.70	..	..	1.25	1.70	1.48	..	1.88	..	1.88	1.49	..	..
31-31.9	1.76	1.76	..	..	1.76	..	..	..	..	..	..	1.60	..	1.99	..	1.99	1.56	..	..
32-32.9	1.84	1.84	..	..	1.84	..	..	..	..	..	..	1.72	..	2.10	..	2.10	1.63	..	..
33-33.9	..	..	..	..	1.92	..	..	..	..	..	..	1.84	..	2.21	..	2.21	1.70	..	..
34-34.9	..	..	..	..	2.00	..	..	..	..	..	..	1.96	..	..	..	2.32	1.77	..	..
35-35.9	..	..	..	..	2.08	..	..	..	..	..	..	2.08	..	..	..	..	1.84	..	..
36-36.9	..	..	..	..	2.16	..	..	..	..	..	..	2.16	..	..	..	..	..	..	..
37-37.9	..	..	..	..	2.24	..	..	..	..	..	..	2.24	..	..	..	..	..	..	..
38-38.9	..	..	..	..	2.34	..	..	..	..	..	..	2.31	..	..	..	..	..	..	..
39-39.9	..	..	..	..	2.44	..	..	..	..	..	..	2.44	..	..	..	..	..	..	..
40-40.9	..	..	..	..	2.54	..	..	..	..	..	..	..	..	..	..	..	..	..	..
41-41.9	..	..	..	..	2.64	..	..	..	..	..	..	..	..	..	..	..	..	..	..
42-42.9	..	..	..	..	2.74	..	..	..	..	..	..	..	..	..	..	..	..	..	..

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and seal its power

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SPINDLETOP HEAVY

The following prices are posted only by the Gulf and Magnolia.

	Oct. 13 1926
Grade "A"	1.25
Grade "B"	1.15

LULING

Based on Contract	1.30

TEXAS PANHANDLE

Magnolia Petroleum Company

Hutchinson, Carson and Gray counties, all grades $1.25

Humble Oil & Refining Company

Hutchinson and Carson counties, all grades 1.25

Other Panhandle Crudes (See table below).

Kay County Gas Company

Hutchinson and Carson Counties

All grades 1.25

Kay County Gas Company and Gulf Pipe Line Company's posting on all grades of Panhandle crude and Humble Oil & Refining Company's posting on Panhandle crude outside of Hutchinson and Carson Counties.

28 to 28.9 gravity	$1.35
29 to 29.9 gravity	1.40
30 to 30.9 gravity	1.45
31 to 31.9 gravity	1.50
32 to 32.9 gravity	1.55
33 to 33.9 gravity	1.60
34 to 34.9 gravity	1.65
35 to 35.9 gravity	1.70
36 to 36.9 gravity	1.75
37 to 37.9 gravity	1.80
38 to 38.9 gravity	1.85
39 and above	1.90

(Humble Oil and Refining Company Only)

39 to 39.9 gravity	1.90
40 to 40.9 gravity	1.95
41 to 41.9 gravity	2.00
42 to 42.9 gravity	2.05
43 to 43.9 gravity	2.10
44 and above	2.15

CRANE-UPTON COUNTIES

Posted by Kay County Gas Company

Below 26 gravity	$ .80
26 to 26.9 gravity	.85
27 to 27.9 gravity	.90
28 to 28.9 gravity	.95
29 to 29.9 gravity	1.00
30 to 30.9 gravity	1.05
31 to 31.9 gravity	1.10
32 to 32.9 gravity	1.15
33 to 33.9 gravity	1.20
34 to 34.9 gravity	1.25
35 to 35.9 gravity	1.30
36 and above	1.35

WYOMING-MONTANA

Wyoming

Byron	2.25
Ferris	1.53
Elk Basin	2.40
Grass Creek	2.40
Rock Creek	2.40
Lost Soldier	1.10
Lance Creek	2.40
Mule Creek	1.75
Notches	.65
Big Muddy	2.25
Osage	2.15
Hamilton Dome	.73
Pilot Butte	1.75
Torchlight-Greybull	2.15
Lander	1.10

Salt Creek

(Midwest Refining Company)

29 to 29.9 gravity	1.73
30 to 30.9 gravity	1.81
31 to 31.9 gravity	1.89
32 to 32.9 gravity	1.97
33 to 33.9 gravity	2.05
34 to 34.9 gravity	2.13
35 to 35.9 gravity	2.21
36 to 36.9 gravity	2.29
37 to 37.9 gravity	2.37

Montana

Sunburst	1.35
Cat Creek	2.15

NEW MEXICO

Artesia	1.95
Hogback	1.95

CANADIAN CRUDE

Oil Springs	2.95
Petrolia	2.80

*Bounty on Canadian crude is ¾ cent per gallon, or 26¼ cents per barrel.

LOUISIANA-ARKANSAS

Caddo Light

38 gravity and above	2.45
35 to 37.9 gravity	2.35
32 to 34.9 gravity	2.25
*Below 32 gravity	2.10

Caddo Heavy

Below 26.0	1.40
26 to 28.9	1.55
29 to 31.9	1.70

Homer

Below 31 gravity	1.85
35 gravity and above	2.20
33 to 34.9 gravity	2.10
31 to 31.9 gravity	2.00

Cotton Valley

All Grades	1.20

Haynesville

33 gravity and above	2.10
Below 33 gravity	2.00

Pine Island

(Posted by Magnolia)

Below 26	1.40
26 to 28.9	1.55
29 to 31	1.70
32 to 34.9	2.25
35 to 37.9	2.35
38 and above	2.45

Bull Bayou

38 gravity and above	2.25
35 to 37.9 gravity	2.10
32 to 34.9 gravity	1.95
De Soto crude	2.30
Crichton	2.10
Bellevue	1.40
Jennings	? 50
Vinton	1.50
Edgerly crude	1.50
Urania	1.10

Smackover

(Standard, Gulf, Louisiana, Shreveport-El Dorado and Atlanta)

27 and above	1.50
26 to 26.9 gravity	1.45
25 to 25.9 gravity	1.40
24 to 24.9 gravity	1.35
Below 24 gravity	1.10

The Texas Company

27 and above	1.50
26 to 26.9 gravity	1.45
25 to 25.9 gravity	1.40
24 to 24.9 gravity	1.30
Below 24 gravity	1.10

El Dorado and Lisbon

(Atlantic)

37 and above at 60 degrees	2.30
35 to 36.9 gravity	2.20
33 to 34.9 gravity	2.10
Below 33 gravity	2.00
East Field (Calion)	.95

Stephens District

26 gravity and above	1.65
Below 26 gravity	1.45

*The Texas Company's posting on below 32 gravity is $1.85.

"When You Have a Problem to Solve Quickly, Stop and Smoke a Cigarette"

Continued from page 43

Drilling a perfect hole is one thing. Retaining the walls of a well is another. And the latter has constituted no mean obstacle to a number of California operators. The accepted practice in Richfield is to use a medium weight mud. Contrary to this fact, the Continental Oil Company uses the heaviest mud available. It is 60 per cent heavier than that used by other operators in the district. By so doing, the operators have been able to minimize the number of cave-ins and to increase the speed in setting casing, thereby cutting down the number of days lapsing between the time the total depth of the hole is attained and the time the well is put on production.

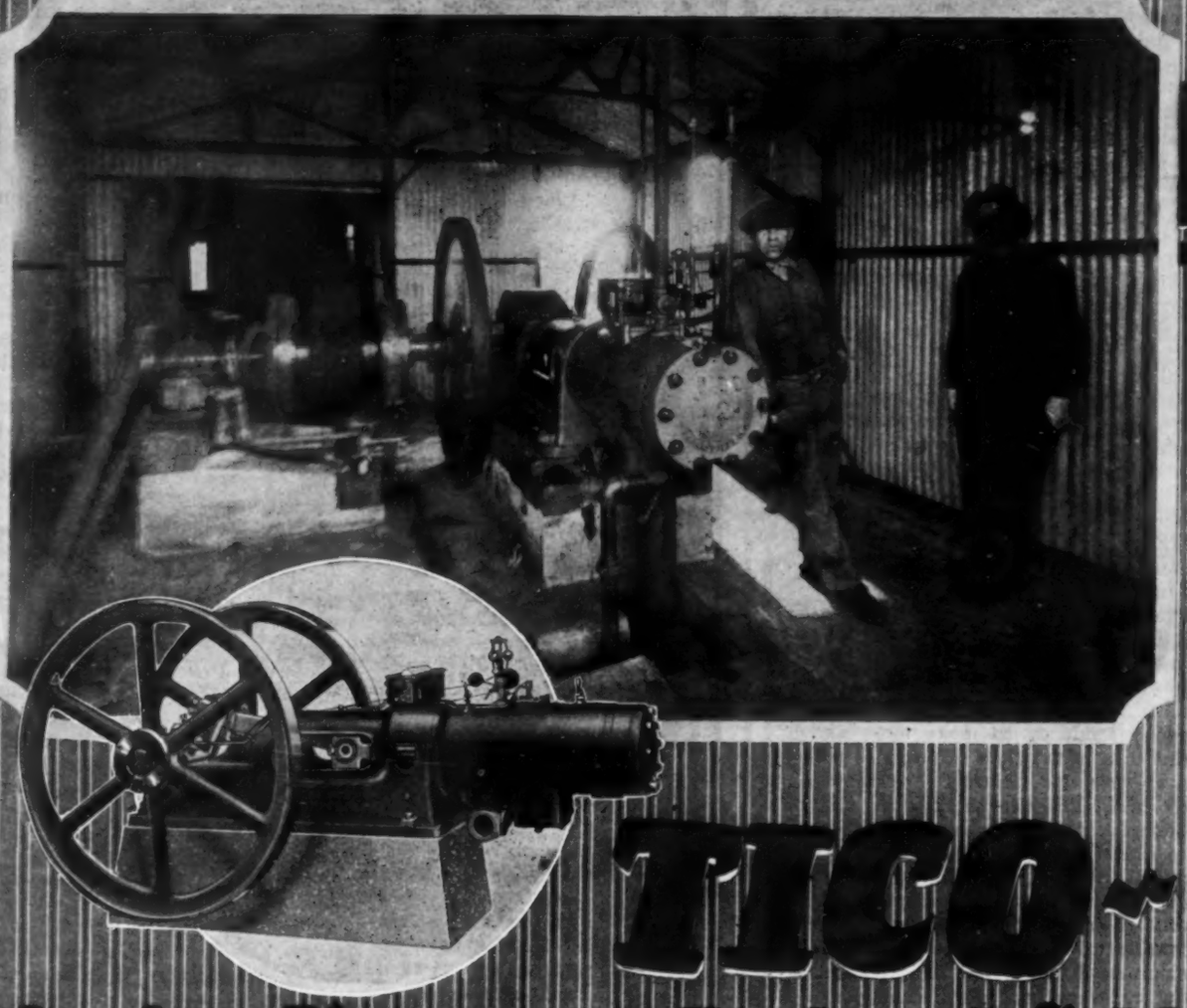
Use of heavier mud means an added weight for pumps to lift. When an operator puts an ultra-heavy load on his pumps he is courting disaster in the way of crystalized or fatigued pump shafts, unless he makes a provision for reducing the tendency of the pump shaft to become fatigued under the extra strain. Possibility of this mishap has been taken care of by causing a constant stream of water to be played on the pump shaft as long as it is in action. The practice has proven satisfactory. Incidentally, and to the horror of some of the dyed-in-the-wool Westerners, the same practice is followed out with regard to brake drums. There is no spontaneous combustion when water is played on the drum. The brakes hold as effectively as dry ones. Moreover, the life of the brake lining is more than doubled when it is kept moistened while in use. These facts do not come from data gathered on one well. They are taken from experience sufficient to warrant their being representative.

Casing Economy.

Another item in the operating end of the industry which has had a good deal to do with many townlot fields developing into economic fiascos, so far as a majority of independents is concerned, has been the matter of casing costs. In many localities this cost has been considerably higher than was called for, due to the "follow-the-leader" attitude taken by operators in boom districts. Just because a thing has been done a certain way for a long time does not mean the precedent is incapable of improvement. This has been proven by the Continental in Richfield.

Where the ordinary operator in the field sets 15½-inch casing, it has been found out that 12½-inch will serve the purpose just as well. If this casing is set at 800 feet, the money saved by using the smaller casing is the difference, roughly, between 800x$5.45 and 800x$3.06. So in the matter of surface casing alone, a saving of $1,912.00 can be effected. In the second string, the Continental has used 8-⅝-inch casing where another has used 10-inch, the smaller being run to 3426 and the larger to 3250 feet. The Continental's second string, much longer than the other operator's second, cost about $9,284. The other's shorter string ran up to about $10,075. These figures are approximate for standard grade seamless pipe.

Added to the above items for reducing costs and drilling time is another practice fairly common in Mid-Continent and California. That is the



TICO

Used on Discovery well in Ingall Field

In every field, TICO Engines are growing in popularity because producers have found that TICOS operate with the ease and certainty of steam engines and are much more economical.

Flexibility is an outstanding feature of TICO operation. During sustained pulls the TICO will throttle itself to loads double its rated capacity without overheating or apparent strain.

The photograph shows a TICO being used for agitating on the discovery well in the Ingall, Oklahoma, field—Roxana's Stover No. 1.

If you desire dependable, economical power, investigate the TICO.

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CONTINENTAL

jacketing of steam lines on the lease with Johns-Manville asbestos. After the lines are jacketed, they are encased in a wooden boxing and laid about two feet under the ground, as shown in the accompanying illustration. Conservation of fuel is not the only reason for treating steam lines thus. When a steam line is kept at practically the same temprature at the point at which steam is delivered to the engine as it is at the point from which it leaves the boiler, there is always plenty of power on hand for an emergency or heavy pull. It means doing away with the necessity of having to wait for sufficient steam to perform a heavy task. In drilling, reserve power is essential to efficient operation.

Getting More Yield From Sand.

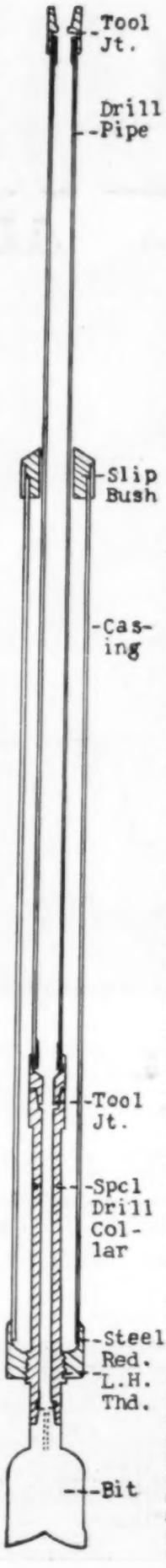
The remainder of this story offers a possible explanation of why the Continental seems to be getting more oil from the same footage of oil sand than its neighbors. The idea, according to Jim Patterson, is this: "Don't bank too much on precedent, but remember, too, that if you can't look back a little, you can't see very far ahead."

Coring is perhaps the most valuable aid to production that has been brought forward in the past ten years. But, it seems, some operators have displayed a tendency to make more use of the core barrel than others. When a man cores, he's usually looking for an oil sand. When he hits that oil sand he keeps coring until he is satisfied there is enough to test for production. Cores he obtains, in California are analyzed for content and general characteristics (coarse, medium or fine).

Continental doesn't core for foot dimension or depth alone. It cores and analyzses every foot of oil sand penetrated. Not necessarily to see how rich it is, but to determine the exact size of the individual grains of the various sand strata. Because of knowledge garnered from this, the Contiental has broken the wall of convention at Richfield and turned bolshevik enough to set screen where the others are using slotted pipe. Here's why and how.

Openings on a certain type 4-¾-inch screen are greater in area than those on the 6-⅝-inch slotted pipe used commonly in the district. So far as sand grains are concerned, openings on all slotted pipe are large enough to pass through. This is not so of screen, which becomes clogged, leaving only a portion of it open to drain the oil sand. So does the screen at first. But later on, if used as Continental uses it, every foot of screen is drawing on a foot of oil sand. The theory of the Continental's screen setting is simply this:

The exact size of the larger grains of sand for a given stratum is determined by analysis of the core. As long as the uniformity of size in this grain continues, a unit of screen one size mesh continues. The mesh is chosen so as to be a little smaller than the larger grains—a mesh large enough



to allow free passage of the smaller grains. If the character of the sand changes as coring continues downward, the size mesh is changed accordingly, rendering it possible to have several different mesh screens in the same hole.

When the well is swabbed in, the immediate result is a sluggish yield. This is because the fine sand has filtered into the screen and is interferring with the flow. However, it has been found out that as the fine sand filters through the coarse sand, it brings with it as far as the outer wall of the screen more of the coarse sand. In an amazingly short time, a perfect gravel filter of large coarse sand is accumulated around the outside of the screen and blocks the further passage of any fine sand. Swabbing removes what fine sand has up to this time been drawn into the screen and the result is a clear, open screen, free from fine sand on the inside, free from an obstructing element on the outside. When this condition is brought about, production increases, and a well often may be taken off the pump and allowed to flow of its own accord. Kraemer No. 2, a recent completion, came in on the beam for 380 barrels August 26. By September 5 the well was flowing 615 barrels per day, clean oil. This well used two sizes of screen, on the 466 feet of productive strata. Fifty-seven feet, three inches was 40/1000 M and the remainder was 75/1000 M.

The particular type of screen used by the Continental is an old steel screen developed about 20 years ago in the Jennings, Louisiana, territory. It is steel wire welded around perforated pipe, made by Fred I. Getty.

Mississippi Wildcat Blows Gas and Salt Water

Shreveport, La.—A number of scouts from Louisiana and Arkansas went to Quincy, Mississippi, last week to see a wildcat gas well drilled by the Amory Petroleum Company in section 7-13-17 of Monroe County. Reports reaching Shreveport and El Dorado are to the effect that the discovery well is making approximately two million cubic feet of gas, with a spray of salt water, from a total depth of 2465 feet. Although a string of six-inch casing is suspended in the hole, no cement was used in setting it; and, consequently, the salt water is thought to be coming from a water sand logged at 1750 feet. The well is still blowing, and it is said to be the plan of its owners to set a string of three-inch pipe on a packer in an effort to exclude the water.

El Dorado operators attach considerable importance to a drilling operation begun by H. L. Hunt, one of the most successful participants in the great Smackover boom, in the Urbana-Lawson area, in Union County. Hunt is building a derrick on the Dykes farm at a location in the northeast corner of the southeast quarter of the southwest quarter of section 21-18-12. Another location has been made in the same area by the Shreveport Oil Corporation, which proposes to drill on the Cordell farm, in the southwest corner of the northwest quarter of the northwest quarter of section 5-18-13. These tests may afford more light on the prospects of the structure revealed by a recent gas blow-out in a well drilled by the Simms Oil Company in section 9-18-13 and by the discovery of oil in commercial quantity in a well drilled by Walber and others in section 6 of the same township, an interest in which has been acquired by the Phillips Petroleum Company.

The Walber well has been in operation by air pressure, by which method it yielded around 2000 barrels of fluid per day, of which from 200 to 400 barrels was oil. The Simms Company has pulled a string of 4½-inch casing set above the Woodbine sand which failed to pay off when treated recently, and is now engaged in pulling cores from a red shale formation at around 3000 feet. The Natural Gas & Fuel Corporation is coring in a similar formation at 2970 feet in its Cordell wildcat, in the same section. The Calgo Oil Company is drilling at 2080 feet in its Primm wildcat, in section 9-18-17 of the same county.

Dick Morton, of Shreveport, brought in another deep sand gasser at Cotton Valley last week. His Josey-Massey No. 1, in section 27-21-10, blew in with an initial volume of around three million cubic feet of gas per day from a broken lime formation at a total depth of 4397 feet.

Ramsey and associates are preparing to plug back to around 4500 feet and make another test in their deep well being drilled on the Gilliland Oil Company's Taylor "B" lease, in section 14-23-8, of the Haynesville field. The hole is now more than 4800 feet deep.

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Magnolia Pipe Line Runs During September Reach High Mark for Three Years

Dallas, Texas. — Crude runs made during September by the Magnolia Pipe Line Company from fields in Texas, Oklahoma, Kansas, Arkansas and Louisiana amounted to 2,860,264 barrels, or 95,342 barrels daily. These runs represent production from Magnolia Petroleum Company's leases and also purchased oil. The daily average runs maintained during September is the Magnolia's high mark for three years, as the figure has not been equalled since the flush days of the Corsicana-Powell field in the fall of 1923. The nearest approach to the recent high mark was reached last July when daily runs averaged 94,113 barrels for the month.

Increased crude runs have resulted in Magnolia making heavier shipments of crude from Beaumont in tankers to Standard of New York's plants on the Atlantic Coast, while the withdrawals of crude from storage in Oklahoma and North Texas tank farms has also been slightly curtailed. During September Magnolia loaded ten tankers and lighters with a total of 658,866 barrels of crude for coastwise movement, such being the largest water shipments made within a single month in more than two years. Magnolia withdrew 131,743 barrels from stocks in Oklahoma during September and 126,212 barrels during the same period from North Texas stocks, leaving 3,772,459 barrels on hand in the former state at the close of the month, and 1,829,970 barrels in North Texas.

Crude purchases and new production in Texas' fields accounted for the bulk of Magnolia's increased runs in recent months. Magnolia purchased and ran to storage in the Texas Panhandle district 393,194 barrels during September, while 152,715 barrels were added to storage in the Mirando district in Southwest Texas. Magnolia will complete an eight-inch line from Luling to the Mirando district late in October, and has approximately 1,250,000 barrels of crude in storage. Magnolia has approximately 1,436,000 barrels in steel tanks in the Texas Panhandle.

The slackened demand for refined products during September reflected in water shipments made by Magnolia from Beaumont docks to foreign countries and for coastwise delivery, but fuel oil movement was on the upgrade. Magnolia's water shipments of refined oils (gasoline, naphtha, kerosene and lubes) amounted to 35,251,761 gallons, as compared to 45,879,946 gallons. Fuel oil shipments amounted to 5,430,534 gallons during Septmber, or 2,034,359 gallons above August shipments.

Total crude runs made by the Magnolia Pipe Line Company from fields in Texas, Oklahoma, Kansas, Arkansas and Louisiana during August and September follow:

	August Totals	September Totals
Luling	496,476	472,076
Panhandle District	298,203	393,194
Mirando District	125,846	152,715
Electra	111,788	106,917
Archer County	69,749	78,147
Burkburnett	80,025	76,258
Lockhart-Lytton Springs	84,645	72,678
Mexia-Wortham	52,859	52,975
Gulf Coast-Spindletop	54,529	46,402
Desdemona-Comanche	24,925	23,146
Corsicana-Powell	17,991	19,163
Ranger-Olden	19,500	17,551
Stephens County	13,269	12,159
Corsicana (Heavy)	8,913	9,186
Petrolia-Clay County	2,898	4,311
Iatan-Mitchell County	3,134	3,768
Thrall-Williamson County	1,777	1,688
Panola County	128	593
Coleman County	181	148
Totals for Texas	1,466,836	1,543,075
Cromwell-Wewoka	406,783	350,255
Healdton	203,700	211,649
Hewitt-Graham	141,140	142,115
Cushing	122,071	111,875
Yale	70,189	65,365
Duncan	52,483	49,166
Burbank	48,790	48,487
Augusta (Kansas)	39,937	36,231
Cement	21,958	21,810
Walters-Beaver Creek	8,809	7,866
Totals for Okla. and Kans.	1,115,860	1,044,819
Smackover	103,859	123,748
El Dorado	70,515	57,202
East El Dorado	2,180	2,029
Totals for Arkansas	176,554	182,979
Bull Bayou	38,178	37,541
Cotton Valley	20,196	26,920
Pine Island	16,667	19,798
Haynesville	5,474	5,132
Totals for Louisiana	80,515	89,391
Totals for five states	2,839,765	2,860,264

Prairie Shipments Low During September

Independence, Kan.—Deliveries of the Prairie Pipe Line Company for September dropped below 4,000,000 barrels, the lowest total for the year. The daily average of 132,326 barrels, however, was higher than the daily average of 129,114 barrels in August.

The record of Prairie shipments for the year follows:

Month	Total Shipments	Daily Average
January	4,187,390	135,077
February	4,071,405	145,407
March	4,588,038	148,001
April	4,332,972	144,432
May	4,542,260	146,525
June	4,215,416	140,514
July	4,234,294	136,590
August	4,005,484	129,114
September	3,906,978	132,326

H. N. Thornton of Eastland, Texas, has been reported missing from his home since September 17, 1925. When last heard from he was in Artesia, New Mexico.

Tulsa Geologists Resume Regular Meetings

Tulsa, Okla.—The Tulsa Geological Society has begun its program for the year, the first meeting being held the night of October 2 in the auditorium of the municipal building.

The second program will be the night of October 16 in the same auditorium. This program will consist of two papers. Theron Wasson, chief geologist of the Pure Oil Company, headquarters Chicago, will present "Explorations in Ecuador." It will be illustrated with lantern slides. J. N. McGirl, chief geologist of the Silurian Oil Company, Tulsa, will present a discussion of errors common to drilling records, with suggested corrective measures.

The Tulsa Geological Society is the largest local geological organization within the oil industry, having 243 members. About three-fourths of these are members of the American Association of Petroleum Geologists. Each member has recieved a blank, which is to be filled and returned to Frank A. Herald, chairman of the program committee.

The blank is a questionnaire, from which it is intended to form a general program for the year. Each member is asked to list the papers he can present during the year, suggest papers others can present and then list some subjects, which he would like to have considered during the year.

Regular meetings are held the first and second Saturday nights of each month from October through May.

Offcials of the Tulsa Geological Society are A. F. Truex, chief geologist Twin State Oil Company, president; Frank A. Herald, Herald Brothers, vice president; Miss Dolly Radler, Amerada Petroleum Corporation, secretary-treasurer.

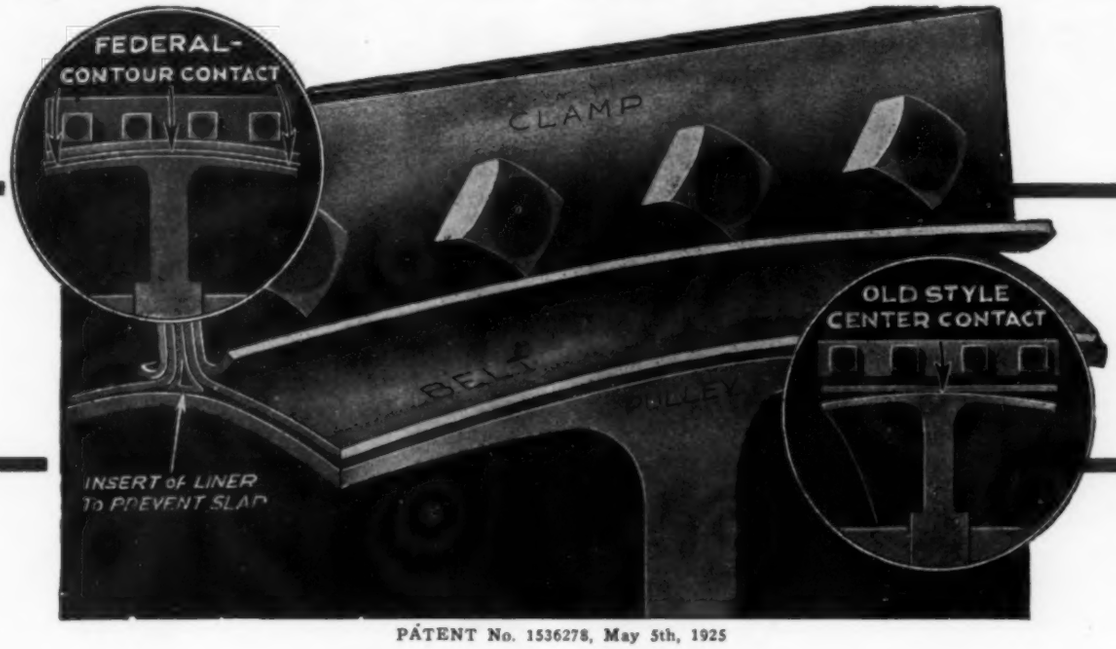
The executive council is composed of W. B. Wilson, chief geologist of the Gypsy Oil Company; Frank Clark, Clark, chief geologist Mid-Kansas Oil & Gas Company; A. L. Beekly, chief geologist Mid-Continent Petroleum Corporation and Harry H. Nowlan, chief geologist Galer Oil Company.

Medina County Wildcat

Houston, Texas.—J. H. Gray et al are erecting an 86-foot derrick on the Louis P. Mann farm, Block 17, two miles north of the Ina field, 12 miles southeast of Hondo in Medina County. This test, a semi-wildcat, is located on a 337-acre recently leased from C. E. Moore and associates.

R. L. Ditto, Houston geologist, made the location, working on the theory of strong gas pressure indicated by a local uplift not so well defined in the Ina field. Earnest Thayer is the driller on the wildcat.

END YOUR CLAMP TROUBLES!



PATENT No. 1536278, May 5th, 1925

"The Curve on the Clamp Fits the Crown on the Pulley"

Six Reasons Why You Should Use

Federal Belt Clamps

1. The old style belt clamp as shown in lower right hand corner of illustration, with straight bars and sharp edges, cuts the belt on the pulley side every time it passes over the pulley. These cuts permit air to enter the plys of the belt and each additional blow as the belt passes over the pulley forces air farther into the plys thus forming air pockets and causing bootlegging.
2. Every FEDERAL BELT CLAMP is made with a curve on the face to correspond with the crown on the belt pulley, thereby preventing side slip on pulley and keeping the belts from sliding on shoes of clutch.
3. The "liner" inserted between clamps as shown in illustration holds the belt firmly against the curve on the outside clamp and forms an uninterrupted curved surface fitting smoothly against pulley.
4. FEDERAL BELT CLAMPS are made of pressed steel, drilled and fittted with ⅝-inch HEAT TREATED STEEL BOLTS and lock washers.
5. By using FEDERAL BELT CLAMPS you eliminate all your clamp troubles, prevent bootlegging in your belts, increase their efficiency and prolong their usefulness.
6. There are imitations and infringements on the market—as a protection to our customers we warn you that unless it is a FEDERAL BELT CLAMP, it is an inferior product.

"Stocked By All Supply Stores"

THE FEDERAL SUPPLY COMPANY

Fort Worth, Texas **MANUFACTURERS** **Mexia, Texas**

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

Summarized Review of Field Results

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	11	3	8	3	..	..	3	..	665	150
California	14	17	10	17	..	..	4	..	3,132	9,816
Colorado	..	13	..	..	..	..	..	13	....	.....
Indiana	7	5	4	3	..	..	3	2	131	140
Illinois	17	8	11	5	..	..	6	3	192	275
Kansas	34	27	19	19	..	..	15	8	5,800	2,260
Kentucky	21	33	16	25	1	..	4	8	150	281
Louisiana	23	24	7	11	4	3	12	10	1,085	704
Michigan	2	1	2	1	..	..	..	..	40	20
Mississippi	..	..	..	..	..	..	..	..	....	.....
Montana	6	9	4	5	..	..	2	4	110	230
New York	13	..	13	..	..	..	..	..	58	.....
New Mexico	..	9	..	1	..	..	..	8	....	50
Ohio	62	68	38	37	15	21	9	10	1,002	679
Oklahoma	72	92	41	49	2	5	29	38	20,540	15,829
Pennsylvania	66	19	53	5	10	11	3	3	1,181	120
Tennessee	..	..	..	..	..	..	..	..	....	.....
Texas	172	208	128	135	6	8	38	65	50,419	44,943
Utah	..	2	..	..	..	..	..	2	....	.....
West Virginia	22	52	8	11	11	34	3	7	36	167
Wyoming	2	29	2	4	..	..	..	25	235	1,310
Totals	544	619	364	331	49	82	131	206	84,776	76,914

Mountain States

WYOMING

Company, Well and Location	Initial Production Bbls.	Depth
Lost Soldier—		
Utah Oil Refining Co.'s No. 5A, SW¼ 2-26-90	210	1930
Ferris—		
Producers & Refiners Corp.'s No. 17, 25-26-87	25	2445

MONTANA

Kevin-Sunburst—		
Rice Oil Co.'s No. 3, NE¼ 13-34-2w	20	1365
Zenith Oil Co.'s No. 1, SW¼ 31-32-2	*	2210
Big Six Oil Co.'s No. 1, NE¼ 29-35-1	25	1560
Gordon Interests' No. 1, SW¼ 24-34-2	*	1500
Adams Oil Co.'s No. 1, SW¼ 20-35-1	25	1580
Cat Creek—		
Continental Oil Co.'s No. 1, SE¼ 4-15-29	40	1460

Texas

ARCHER COUNTY

Continental Oil Co.'s Hamilton 17	*	1841
Empire Gas & Fuel Co.'s Parkey 3	75	1588
Parkey 4	10	1576
Gates et al's Thomas 13	75	1173
Thomas 15	50	1171
Magnolia Pet. Co.'s L. L. Hudson 4	20	1165
Marland Oil Co.'s Thomas 11	20	1167
Turbeville 4	375	1518
Murchison-Fain Oil Co.'s Logan 4-B	30	1133
The Texas Co.'s Turbeville 13-C	†	1370
Tidal Oil Co.'s Farmer 1	35	1495

BIG LAKE

Big Lake Oil Co.'s University 92	165	2940
University 8-B	40	2974

BROWN COUNTY

Curry-Moore et al's Wooldridge 5	600	1260
Wooldridge 6	250	1250
Wooldridge 7	600	1762
Gillespie et al's Henson 14	20	1292
Gilman & McMurray's Thompson 7	100	1236
Kane Production Co.'s Foster 5	100	1220
Louisiana O. & R. Co.'s Henslee 6	15	1285
McLester Oil Co.'s Josie Wooldridge 9	*	1355
Mid-West Exploration Co.'s Suttles 2-A	5	1135

BURKBURNETT

R. R. Clark-Waggoner & Hammond's Ward-Todd 3	200	1903
Magnolia Pet. Co.'s S. L. C. Ramming 22	17	1550

CALLAHAN COUNTY

Canary et al's Cutbirth 1	*	3050
J. S. Cosden et al's Ramsey-Estes 1	*	1800
Cranfill-Reynolds Oil Co.'s Henderson 6	40	1404
Florence Oil Co.'s Lamar 2	10	1418
T. B. Slick et al's B. B. Bond 3	75	1405

COLEMAN COUNTY

Curtis et al's Sealy-Smith 1	*	3028
Kirby Petroleum Co.'s Harris 1	*	2500

COOKE COUNTY

John W. Hooser's J. A. Dennis 7	200	1276
Lynch-Stahle & Burris' Dangelmeyer 2	*	987
Sun Oil Co.'s A. Hyman 4	55	1267

EASTLAND COUNTY

Chestnut & Smith Corp.'s Noble 1	*	3545

ELECTRA

Gulf Prod. Co.'s R. J. Miller 63	20	1958
Forbes-Burnett 21	5	1575
Grace Jennings 19-A	10	1632
W. A. Patterson et al's L. P. Douglas 2, blk 2	20	1080
The Texas Co.'s W. T. Waggoner 313	120	1756

FOARD COUNTY

Central Oil Interests' Burress 1	*	3003

Peden Entertains

Houston, Texas. — Peden Iron & Steel Company entertained the Houston Purchasing Agents' Association Monday, October 11, with a luncheon given in the assembly room of its plant. Approximately 100 Houston buyers and other guests, including many out of town salesmen and visiting officials of various companies were shown through the large jobbing concern, which includes a complete oil field supply department. The company, headed by E. A. Peden, is one of the oldest concerns in its line in Houston.

GRAY COUNTY

Young et al's A. Holmes 1, shot	360	3185

HUTCHINSON COUNTY

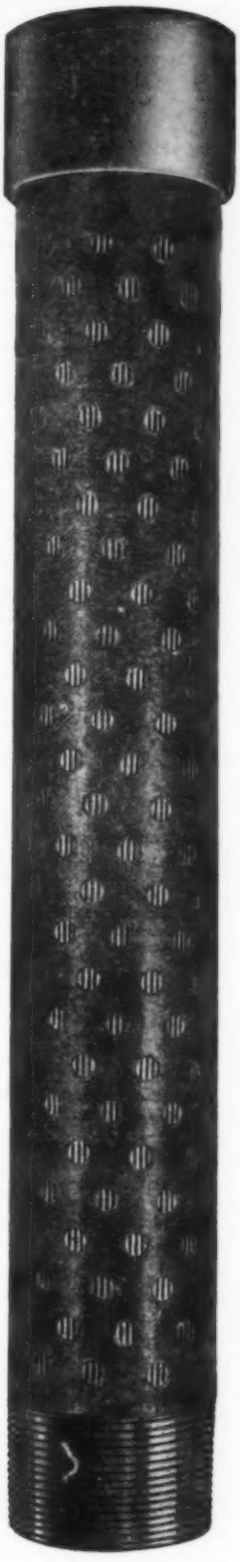
American Ref. Co.'s J. F. Weatherly 1	1500	2997
Canadian River Oil Co.'s W. L. Kingsland 5, shot	100	2965
Dixon Creek Oil Co.'s Smith 20	150	2945
Gulf Prod. Co.-Walter Cline & Panhandle Ref. Co.'s Dial 20, shot	165	2923
Dial 22, shot	200	2817
Dial 26, shot	50	3023
W. H. Holmes-Currie-McKnight's Smith 3, shot	500	2765
Lucky Ten Oil Co.'s Smith 3	150	2752
Marland Oil Co.'s J. A. Whittenburg 9-A, shot	400	3002
J. A. Whittenburg 10-A, shot	960	2951
J. A. Whittenburg 11-A, shot	200	2948
J. A. Whittenburg 13-A, shot	1200	2999
Matheson & Dunn's E. B. Jones 1	*	350
Pattison-Lenix Oil Co.'s Smith 2	40	2840
Phillips Pet. Co.'s J. A. Whittenburg-Coble 1 6	100	2933
Phillips Pet. & Gibson Oil Corp.'s J. A. Whittenburg-Patton 3	3500	2888
Phillips-Heywood et al's Smith 2, shot	2000	3064
Prairie & Phillips Pet. Co.'s Johnson 4-A	100	2954
Johnson 7-A	7000	2995
Johnson 17-A, shot	100	2788
Maggie Weatherly 8, shot	100	3041
Henry Riley & W. H. Holmes' Smith 2	100	2885
Roxana Petroleum Corp.'s Jasper 1, shot twice	5	2900
White Eagle O. & R. Co.'s E. V. Hedgecock 2	400	2800

K-M-A AND IOWA PARK

Continental Oil Co.'s (Texhoma) Chilson 1-A	10	1190
Kimmel & Dillard's Fassett-Tuttle 3	*	1375
Perkins-Cullum & Stump Oil Co.'s Chilson 6	20	1183
Simms Oil Co.'s Chilson 3	100	1180

MONTAGUE COUNTY

Camp Oil & Gas Co.'s Snapp Estate 1	1	2008
F-H-E Oil Co.'s N. J. Howard 5-A	25	1350
Salmon 2-B	12	928
Harris-Simons et al's Maddox 4	75	859
Pure Oil Co.'s Maddox 1-D	50	853
Maddox 4-C	70	908



Simplicity

It is not easily attained. Any device, useful and simple, also has beauty of design. Compare McEVOY WIRELESS WELL STRAINER with other types which are awkward, indirect, wasteful of material and assault the eye by the futility of useless labor expended upon them——UGLINESS.

McEVOY "WIRELESS" WELL STRAINERS need not be handled with the tender care bestowed upon a can of nitro-glycerine. Spudding, rotating, sidetracking, pulling will not damage them.

And INLET AREA—McEvoy Strainer has no screening surface which "goldbricks" on the job. The slots are VERTICAL, admitting 20% more oil than horizontal slots. The perforations are larger. Flush jointed, McEvoy Strainer can be made to fill the hole exactly. When lowered into a mudded hole the screening surface will not jam.

Made in all steel, brass and steel, all brass, all bronze.

SPECIFY McEVOY STRAINER IN YOUR NEXT SETTING

We make:

STRAINERS
PACKERS
BREAK OUT WASH RINGS
WOOD WASH PLUGS
STEEL WASH RINGS
McEVOY LUBRICATED
BACK PRESSURE VALVES
SET SHOE ASSEMBLIES

McEVOY DOUBLE WEAR VALVE UPSET FLUSH JOINT BAILERS, WATER WELL SUPPLIES

"To substitute facts for appearances and demonstrations for impressions."

J. H. McEvoy & Company

Houston ..... **Los Angeles**

Company, Well and Location	Initial Production Bbls.	Depth
The Texas Co.'s Gist 3-B	60	861
Hodges 1	*	2341
Martin 4	100	1169
Oldham 21	85	1130
Oldham 22	*	1456
Oldham 24	50	1390
Texhoma (Continental) Oil Co.'s Bouldin 5-A	105	1099
Maddox 4-A	70	892
Rowland 11	240	1097
Rowland 12	35	1115
PALO PINTO COUNTY		
Chestnut & Smith Corp.'s Guest 1	*	3825
SHACKELFORD COUNTY		
Independent O. & G. Co.'s Davis 2	100	1466
Jackson et al's Flippen 1-B	†	900
Roeser-Pendleton, Inc.'s W. I. Cook 1-B, sec 60	1250	1296
W. I. Cook 7-B, sec 60	530	1204
W. I. Cook 8-B, sec 60	*	1223
W. I. Cook 19-B, sec 85	*	1246
Roeser-Pandleton & Marland Oil Co.'s W. I. Cook 26-A, sec 84	160	1327
W. I. Cook 30-A, sec 84	125	1331
Southern Exploration Co.'s Dyer 1	15	938
Tannehill Oil Co.'s Moberly 1, sec 59	¶1½-500	1130
The Texas Co.'s Osborne 1	75	795
SOUTH VERNON DISTRICT		
Humble O. & R. Co.'s Bond et al 14-B	50	2420
W. T. Waggoner 7-I	25	1892
W. T. Waggoner 8-I	15	1908
Milham Corp.'s W. T. Waggoner 6-H	20	2562
W. T. Waggoner 8-H	25	2385
W. T. Waggoner 12-H	20	2600
W. T. Waggoner 3-I	60	1905
W. T. Waggoner 16-L	140	2363
Phillips Pet. Co.'s W. T. Waggoner 1-C	110	2360
W. T. Waggoner 10-F	200	2408
W. T. Waggoner 2-R	60	2343
Stockton-Maxwell et al's Zipperle 1	*	1420
Waggoner Ref. Co.'s W. T. Waggoner 1-D	20	1956
W. T. Waggoner 2-D	40	1954
STEPHENS COUNTY		
T-P Coal & Oil Co.'s Gardenshire 5	¶4½	1559
THROCKMORTON COUNTY		
Humble O. & R. Co.'s McKeichen 1	*	936
Martin-Hines et al's Davis 1	*	1641
McCurdy et al's Ledbetter 1	*	750
UPTON COUNTY		
Humble O. & R. Co.'s A. S. Burleson 3	85	2185
Marland Oil Co.'s A. S. Burleson 23	135	2150
A. S. Burleson 28	130	2224
Sanger Bros. 9	155	2385
Sanger Bros. 15	135	2250
Republic Prod. Co.'s Baker 4	80	2232
WHEELER COUNTY		
Mid-Kansas O. & G. Co.'s W. C. Company 1	¶15-30	2291
Murchison-Fain Oil Co.'s Binkley-Cain 1	*	2440
YOUNG COUNTY		
Atlantic Oil Prod. Co.'s Keen 1	*	1006
Bridwell-Mayfield et al's Williams 7	20	674
Jeffers & Feffers' Ferguson 1	*	600
Madden-Hunt et al's Benson 8	20	920
McMullen et al's Prideaux 2	*	705
Prideaux 3	*	628
Robert Oil Corp. & Carter-Ruff's Stewart 5	110	825
Stewart 7	*	867
Simms Oil Co.'s Routan 3	10	870
Texas Unity Oil Co.'s Hunt 1	*	1050
Tidal Oil Co. et al's Benson 18-A	15	924
Benson 19-A	20	928
Wichita Production Co.'s Benson 9	10	1082
Woods & Holbrooks's Watson 2	†	400
NIGGER CREEK		
Atlantic Oil Prod. Co. et al's Rosson 3	420	2829
Cranfil-Reynolds & Godley O. & G. Rosson 3-A	410	2805
Transcontinental Oil Co.'s Medlock 2	450	2810
Rosson 6-A	200	2826
Rosson 12	150	2836
Rosson 14-A	*	2843
Trans-Continental Oil Co.'s Cogdell 6	250	2850
Medlock 3	675	2815
Rosson 10	300	2850
Rosson "A" 12	250	2840
Rosson "A" 13	300	2850
GULF COAST		
Spindletop—		
Gulf Prod. Co.'s Roche 5	4000	2735
Atlantic O. P. Co.'s McLean 9	500	3450
Rio Bravo Oil Co.'s T. & N. O. 7	3000	2830
T. & N. O.	5000	3124
Unity Oil Co.'s McFaddin 90	*	1930
Batson—		
Paraffine Oil Co.'s Paraffine 67	50	1200
Goose Creek—		
Humble Oil & Refining Co.'s Simms-Smith 26	100	2875
Hull—		
Gulf Prod. Co.'s Phoenix Dev. Co. 74	2000	3350
Republic Prod. Co.'s Dolbear 126	4000	2309
Blue Ridge—		
J. S. Abercrombie's West Schenck 2	700	3290
Pierce Junction—		
J. F. Bashara's Higgins 1	1200	3575
SOUTHWEST TEXAS		
Duval County—		
Humble Oil & Ref. Co.'s Walsh 6	278	3594
O. W. Killam's Sec. 319	¶	1756
Jim Hogg County—		
Houston Gulf Gas Co.'s Block 20, Section 291	175	1251
K. & S. Corp.'s Holbein 47, Block 6, Section 11	500	2146
Simms Oil Co.'s No. 14, Sec. 291	40	1287
No. 4, Block 16, Sec. 81	40	1304
Wheelock & Collins' No. 4, Block 21, Sec. 291	75	1250
No. 6, Block 21, Sec. 291	175	1244
Houston Oil Company Mesquite Blk. 1, sur, 16	¶	1690
Graysburg Oil Co. No. 5, sur 81	¶	1342
Magnolia Pet. Co. No. 2 de la Garza, sur 291	800	1280
Simms Oil Co. No. 15, sur 291	¶	1289
Smith & Maddox Palacios 11	500	1290
Palacios 12	500	1291
Palacios 14	500	1301
Webb County—		
Harper et al's No. 1, survey 835, Section 135	¶	2146
Ruthuda Oil Co.'s Bruni 7, Block 18	90	1735
Verdine et al's Benavides 1, survey 123	¶	1524
Crown-Central-Stayel & Wynne Bruni 4	50	1732
Murchison & Fain Bruni 4, sur 58	150	1579
O'Hern-Putman-Seacord 2, sur 174	35	....
Sun Oil Co. No. 6, blk 44, Albercas Grant	350	1730

California

Company, Well and Location	Initial Production Bbls.	Depth
Huntington Beach—		
E. J. Miley's Pacific Electric 4	1600	4007
Standard Oil Co.'s Huntingtn 1, wo.	288	3084
Long Beach—		
Fred Fitch's Southeast Extension 1	*	4685
General Pet. Corp.'s K. & H. 7, wo	148	5100
Julian Pet. Co.'s Rappaport 1	*	4725
Athens-Rosecrans—		
Star Pet. Co.'s Bolson 1	*	4681
Baldwin Hills-Inglewood—		
Associated Oil Co.'s Vickers 43, wo	285	2228
Standard Oil Co.'s Stocker 7	116	1957
Rideout Heights—		
McCaslin Oil Co.'s Patton-Gregg 2	75	1217
Pan-American Pet. Co.'s Chancorena	60	2799
Seal Beach—		
Union Oil Co.'s Bryant 1	*	5565
Sunset Area—		
Lewis Pet. Co.'s No. 9	300	2054
Midway—		
Hugh B. Evans, Inc.'s No. 7	100	3290
Elk Hills—		
Union Oil Co.'s Elk Hills 16	160	3586

Arkansas

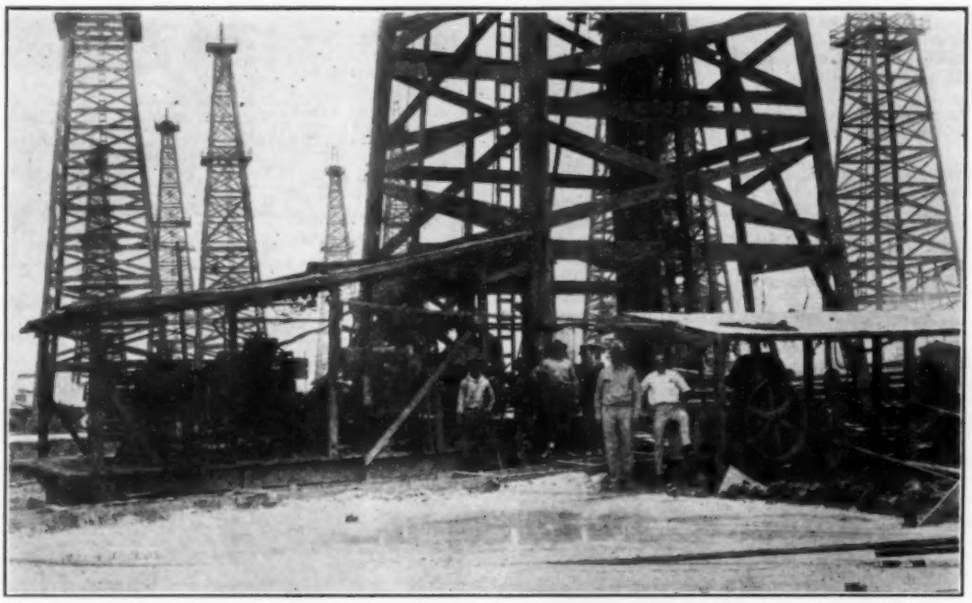
Company, Well and Location	Intial Production Bbls.	Depth
Smackover Field, Ouachita County—		
Humble O. & R. Co.'s Hildebrand 10, 28-15-15	150	2596
Roxana Pet. Corp.'s Bennett A-4, 32-15-15	*	2409
Sure Oil Co.'s Snyder 4, 34-15-15	250	2353
Smackover Field, Union County—		
Hollyfeld et al's Giller 13, 10-16-15	*	2008
Magnolia Pet. Co.'s Childs 3, 8-16-16	30	2604
The Texas Co.'s Hays 8, 4-16-15	155	2365
Total, 6 wells	585	
Lisbon Field, Union County—		
Humble O. & R. Co.'s Goodwin 2, 20-17-16	15	2164
Magnolia Pet. Co.'s Hulsey 2, 20-17-16	20	2172
Rovenger Oil Corp.'s Graham 5, 16-17-16	25	2114
Southern Crude Oil Purch. Co.'s Slaughter B-5, 3-17-16	20	2130
Total, 4 wells	80	

North Louisiana

Bellevue Field, Bossier Parish—		
R. L. Crook's Larkin 4, 14-19-11	¶½	400
Caddo Parish—		
W. D. Chew's Caddo Levee Board A-1, 9-20-16	*	2307
Gulf Ref. Co.'s Ferry Lake 253, 22-20-16	45	2286
Manie Drilling Co.'s Cunningham 1, 15-17-14	*	2300
Ohio Oil Co.'s E. K. Smith 21, 12-21-15	10	1644
E. K. Smith 22, 7-21-14	175	1659
Total, 5 wells	230	
Cotton Valley Field—		
R. W. Norton's Josey-Massey 1, 27-21-10	¶3	4397
Monroe Gas Field—		
LaDel et al's Fee 34, 6-19-5e, Ouachita Parish	¶20	2171
Natural Gas & Pet. Co.'s Tensas Delta 8, 33-22-4e, Morehouse Parish	¶7½	2171
Total, 2 wells	¶27½	
Urania Field—		
O. W. Clark Trust's arper 10, 26-10-1e, Winn Parish	300	1503
Keen & Woolf's Griswold 1, 3-9-1e, LaSalle Parish	40	1507
Natural Gas & Fuel Corp.'s Urania P-1, 23-10-1e, Winn Parish	*	1531
Oil Operators Trust's Urania 6, 7-10-2e	500	1522
Total, 4 wells	840	
SOUTH LOUISIANA		
Edgerly—		
Savoy Oil Co.'s Hill 2, wo	15	2950
Vinton—		
Vinton Pet. Co.'s Gray 30	15	2460
Gulf Ref. Co. of La.'s F. H. Gray 5	250	2100
The Texas Co.'s Vincent 17	150	2100
Evangeline—		
General Pet. Co.'s Fontenst Fee 6	*	1705
F. I. Getty's Chicago-Jennings 11	*	1400

Oklahoma

Carter County—		
Magnolia Pet. Co., Hardin 2, SWc SE SE 18-1-2	653	2847
Simpson and Fell, Parnell 1, NWc SE NW 34-1-3	9	3035
Westheimer Oil Co., Snyder 2, SEc SW SW 34-1-3	120	2497
Skelly Oil Co., Smith 1, NWc SE 3-2-3, owd	779	2297
Magnolia Pet. Co., Lohman 11, SEc SW NE 23-2-3	100	2360
Creek County—		
Southwestern Pet. Co., Bruner 3, C EL NW NE 27-17-8	30	3112
Gled Oil Co., Ross 5, C EL SW 13-19-8	100	2178
Grieves Oil Co., Grayson 1, NWc NE 24-19-8	60	2995
Burk-Greis and Darby Pet. Co.,		



Electric drilling rig and crew— Gulf Production Company's J. F. Webb No. 2 Spindletop

Unified Service

Only when you electrify do you get UNIFIED service. Our engineers recommend (and order, if requested) the motor and equipment particularly adapted to the job. They supervise installation to insure best results. And after a job is in operation they visit it regularly, checking results, offering suggestions; making special trips when and where they can be of assistance. From the moment you specify ELECTRIC power they are at your service and responsible for performance.

With no other power can you secure this UNIFIED service.

Write Lock Drawer 809, Beaumont, Texas, and let our engineers explain more fully what this UNIFIED service means to you.

Eastern Texas Electric Company - Louisiana Electric Company, Inc.
Gulf States Utilities Company - Western Public Service Company
Under the Executive Management of Stone and Webster INC.

Company, Well and Location	Initial Production Bbls.	Depth
Scruggs 1, NWc 21-17-8	420	3504
Gypsy Oil Co., Richards 14, SW NE NW 1-18-11	780	2102
Riverland Oil Co., Land 2-A, SEc NW NW 1-18-11	840	2102
Mid-Continent Pet. Corp., Harry 2, SWc SE 4-14-10	110	3162
Lina Oil & Gas Co., Green 4, owd.. NWc NE NW 24-17-8	*	3594
Scruggs and Carter Oil Co., Rogers 1, SEc 36-15-10	*	3137
Chief Drlling Co., Independent O. & G. Co., Settle 1, SEc SW 25-14-10	*	3345
Garfield County—		
Mid-Continent Pet. Corp. ndn Marland Oil, school land 65, SWc NE SE 13-22-4	150	3642
Sinclair Oil & Gas Co., artley 46, NEc NW NW 18-22-3	360	3604
Sinclair Oil & Gas Co., Grews 16, SE NW NW SW 19-22-3	60	2191
Charles Knox, McLean 4, SEc NW NW SW 31-22-3	10	2223
Grady County—		
Marland Oil Co., Burkes 1, NEc SE NE 17-3-5	200	1820
Grant County—		
Blackwell Oil & Gas Co., Lane 2, NEc 22-27-3	53	3997
Gypsy Oil Co., Mueggs 1, SEc NW 33-26-3	*	5449
Hughes County—		
Dixie Oil Co., Garner 7, SEc NW NE 5-7-8	1200	4216
Kay County—		
Comar Oil Co., Brown 1-W, SWc SE 16-29-1	5448	3408
Vernon Oil & Gas Co., Brokehouser 2, SWc SE 17-29-1	120	2335
Gypsy Oil Co., Gardner 3, NWc NE NW 29-25-1	700	4334
Gypsy Oil Co., Gardner 4, SW NE SW 28-25-1	405	4322
Gypsy Oil Co., Tonkawa 1, NEc NW 33-25-1	120	4345
Anolu Oil Co., Slocum 3, SEc NW 16-27-1	*	3437
Manahan et al, Barr 2, SWc NE 16-27-1	*	3498
Lincoln County—		
Mid-Continent Pet. Corp., Harp 9, NWc SE NW 8-15-6	100	4029
Magnolia Pet. Co., Belless 5, SWc 3-14-5	*	3484
Noble County—		
Mid-Continent Pet. Corp. and Marland Oil Co., school land 12, NEc SW SE 16-24-1	5	2005
Osage County—		
Phillips Pet. Co., No. 12, SE NE SE 20-26-6	210	3011
Phillipa Pet. Co., No. 1, SWc 21-26-6	358	2996
C. F. Lake et al, NE SE SW 6-24-8	75	2846
Tidal Oil Co., No. 4, NWc SW SE 20-24-9	135	2179
Peters Pet. Co., No. 1, NW NE SW 32-24-9	30	2160
Ashland & Barnsdall Oil Corp., No. 13, SE NW SW 14-23-11	15	1675
Pioneer Pet. Co., No. 3-A, NWc NE 8-20-11	20	1898
Jennings et al, No. 3, C NL SW 31-29-12	*	lcn.ab
C. O. Ross et al, NW NE SW 10-17-11	*	1153
Adlum et al, No. 2, SEc NW SE NW 8-23-10	*	2263
Prairie Oil & Gas Co., No. 1, SEc NE 10-17-6	*	3365
Pawnee County—		
Mid-Continent Pet. Corp., school land 23, SWc NE SW 16-20-7	35	2589
Seminole County—		
Sinclair Oil & Gas Co., Pierce 10, NWc SE SE SE 33-11-8	30	1845
Mid-Coninent Pet. Corp., Tayoche 2, NWc SE SW 24-9-6	2150	3931
Tidal Oil Co., Mahardy 2, SEc NE SW 24-9-6	4210	4192
Independent Oil & Gas Co., Holm and Javis, Kidd 1, SEc NW SE 7-9-8	125	3241
Indian Territory Illuminating Oil Co., Goforth 2, SEc SW NE 15-8-6	¶36	2436
Stephens County—		
Beard & Cobb, Brigham 1, SEc NW SW SW 30-1-8	25	1998
Tulsa County—		
Sand Springs Home, unallotted 1, SEc NE 23-19-11	150	2256
Thompson & Black, Jenkins 4, C WL NE NW 10-16-12	¶	1686
Thompson & Black, Barthoff 5, C SL SW SW 5-16-13	40	2142
Sand Springs Home, Gates 1, SEc NE 4-19-11	*	2254
Sand Springs Home, Arch 1, NWc SE SE 23-19-11	*	2521
A. A. Thronton, Inchoe 1, C SL NW SE 35-19-11	*	2474
Comanche County—		
Red Seal Refining Co., Joe Borovenski 1, NWc 5-1-10	*	1633
Jefferson County—		
Humble Oil & Refining Co., Cline 1, SWc SE 27-6-5	*	2002
McIntosh County—		
Tiger Mountain Oil Co., Stidhan 3, NWc SW NW 18-11-14	*	1930
Okfuskee County—		
Independent Oil & Gas Co., Sugar 13, C EL NW NE 13-12-11	*	3400
Arkansas Fuel Oil Co., Barnett 2, NEc SW SW 33-10-9	*	3868
Prairie Oil & Gas Co., Collins 1, SEc SW 26-11-9	*	3984
Okmulgee County—		
H. E. Clark et al, Scott 4, SWc SE SW 14-15-14	*	2465
Cumberland Pet. Co., Fox 12, NEc NW NW 21-13-14	*	lcn.ab
Rogers County—		
E. L. Maxon, Solomon 2, SWc NE NW 7-19-16	*	500
R. E. Swift Lewis 1, NEc NW 6-19-17	*	508
Wagoner County—		
F. C. Winters, Carpenter 1, SWc 19-18-15	*	1290
Henry Barns, Wiley 1, C SL SE NW 6-18-16	*	800
J. Nealey, Bradley 3, SWc 19-17-18	*	650
Ebon Ryan, Metfger 1 SWc 5-17-19	*	690
Wilson et al, Davis 1, NEc 8-16-18	*	648

Kansas

Company, Well and Location	Initial Production Bbls.	Depth
Butler County—		
Empire Gas & Fuel Co., Worrell 2, NWc SW SE 12-27-6	200	2708
Johnson et al, Blakeman 7, SWc NE SW 3-28-6	400	3041
Cowley County—		
Marland Oil Co., Graham 1, SWc NE 15-32-4	450	3268
J. A. Hull, Wallace 2, SEc NE NW 15-32-4	*	3371
Elk County—		
Pure Oil Co., Chaffine 11, NWc NE NE SE 14-31-10	80	1648
Theta Oil Co., Marshall 1, NEc SE SE 27-31-10	*	2039
Miller et al, Nelson 1, SWc NW 5-31-11	*	1970
Greenwwod County—		
Phillips Pet Co., Green 3, NWc NE NE 11-22-10	150	2140
Phillips Pet. Co., Ritchey & Moore, Green 2, NWc NW NE 11-22-10	75	2151
Empire Gas & Fuel Co., Fromme 13, SEc NW 14-22-11	100	1909
Empire Gas & Fuel Co., Bartlett 7, SWc NE SE 14-22-11	30	1910
Empire Gas & Fuel Co., Morris 6, C SL SE NW NE 19-23-9	50	2550
Pure Oil Co., Oliver 6, SEc NE SE 8-23-11	40	1994
The Texas Co., Fogle 2, SWc NW NW 16-23-11	50	2005
The Texas Co., McGilvrey 1, NEc SE NE 17-23-11	250	1972
Tidal Oil Co., Shadel 10, SWc NW SE 15-23-13	60	1828
McGinnis et al, Wiggins 2, NEc SW NW 30-24-11	200	1850
Davis, Hazlett et al, DeMalorie 10, SWc SE SW 7-22-11	*	lcn.ab
Vickers Pet. Co., Dales 1, NEc SE SE 2-24-10	*	2235
Farr et al, Hammond 1, SWc NE NW 33-25-10	*	2023
Skelly Oil Co., Hall 1, NEc SW 23-25-11	*	2305
Lyon County—		
Theta Oil Co., Jones 4, C EL NE SW NW 30-21-10	100	2262
Belford & Charey, Jones 1, SEc SW SE 16-21-10	*	lcn.ab
Gasche & Amerada, McCollough 1, SWc SE 36-21-12	*	1962
Holl et al, Osgood 1, SWc SE SE 31-21-5	*	2448
Marion County—		
National Refining Co., Waner 4, C EL SE SW NE 17-21-4	340	2442
Summer County—		
Roxana Pet. Corp., Mason 1, SEc NW 25-31-2	1100	1885
Roxana Pet. Co., Rutter 1, SWc NE 25-31-2	1400	1885
Roxana Pet. Co., Van Sickel 1, NWc SE 25-31-2	775	1885
Chase County—		
Empire Gas & Fuel Co., Lipps 3, C SE SW 19-18-7	*	lcn.ab
Sinclair Oil & Gas Co., Atyeo 1, SEc 36-21-9	*	lcn.ab
Chautauqua County—		
Mitchell, Fraxier et al, Chaffine 1, NWc SE SE 7-32-11	*	2301
Prairie Oil & Gas Co., Bybee 1, NEc SE SE 7-32-11	*	2301
Prairie Oil & Gas Co., Bybee 1, NEc SE 35-34-9	*	2288
Coffey County—		
Dayby Oil Co., Miller L, NEc SE SW 8-22-14	*	1736

Eastern States

PENNSYLVANIA

Bradford Field—		
South Penn Oil Co. Redfield 107	20	....
Rounds & Co. 57	12	....
Rounds & Co. 58	12	....
Fee 1	5	....
Bingham 439, tract 100	7	....
Bingham 400, tract 70	2	....
Bingham 482, tract 26	4	....
Bingham 150 ,tract 69	3	....
Weston Jr. 95	4	....
Mix Creek Oil Co. Mix 1	5	....
Mix 2	5	....
Mix 3	5	....
Mix 4	5	....
Forest Oil Corp. Forest A-19	5	....
Forest A-22	5	....
Forest A-24	5	....
Forest A-26	5	....
Petroleum Reclamation Co. Mott 16	3	....
Mott 17	3	....
Mott 18	3	....
Pratt 17	2	....
Pratt 18	2	....
Hazlewood Oil Co. Block 23, tract 93	2	....
Block 27, tract 126	3	....
Melvin & Co. Lovell 1	4	....
Lovell 2	3	....
Piper & Lloyd, Ekas 12	4	....
Ekas 13	2	....
Associated Producers Co., Bingham 582, tract 376	10	....
Pollock & Co., Pollock 1	7	....
Lewis J. Emery, Rasey 22	5	....
Dana & Dana, Dana 44	4	....
Holmes Oil Co., Hedlund 1	7	....
Greene County—		
Consumers Fuel Co., James S. Rutan 2	832	....
Morris & Co., W. T. Grove 1	¶2	....
Elliott, Moore & Co., J. A. Reese 1	¶3	....
Carnegie Nat. Gas Co., Calvin S. Day 2	¶2¼	....
Reese Hrs. 2	¶2½	....
Charles Bowers 1	¶2	....
South Penn Oil Co., Jacob Eddy 3	¶½	3310
Venango County—		
G. H. Torney, Cox 1	2	....
Cox 2	5	....
T. G. Phinney & Co., Fisher Hrs. 1	2	....
Fisher Hrs. 2	*	....
Grimm & Jenkins, Foster 17	2	....
Foster 18	2	....
Kapp Bros., Kapp 2	¶1	....
S. A. Lytle, Siggin 29	3	....
Woodburn, Gregory & Co., Crawford 79	3	....
Brutsche & Co., Smith 88	3	....
Midland Oil Co., McNellie 21	2	....

Company, Well and Location	Initial Production Bbls.	Depth
National Pet. Co., Bowman 12	*	
Center-Middle Field—		
J. P. Eaton, Benedict & Co. 5	60	
Cozard, Rumbold & Co., Ostend 8	7	
Ostend 9	20	
Crawford County—		
Hood & Mead, Hood 18	20	
Vim Oil Co., Kerr 8	12	
Caldwell, Warner & Co., Warner 2	12	
Butler County—		
Campbell & Co., Lutz 4	10	
Battenfelder & Co., Seiders 1	8	
Ritzert Bros. & Co., Halben 1	¶1½	
J. C. Trees, Trees 2	¶1¼	
Shaner & Co., Beilstein-Shaner 4	*	
Clarion County—		
D. & H. O'Neil, O'Neil 8	3	
Crawford & Hess, Scholenburg 1	¶1	
G. P. Myers, Myers 22	*	

NEW YORK

Allegheny County—		
Polley Bros., Brown 3	5	
Herrick & Sturdevant, Pratt 1	5	
Helen Randall, Reid 1	10	
Demitt & Gilligan, Gilligan 1	5	
Tuller & Giggee, Nobles 1	7	
F. C. Shaner & Co., Coast & Co. 1	4	
E. G. Stephen & Co., Kurlzhaltz 1	3	
C. M. Lippert & Co., Lippert 1	4	
M. J. Crowley & Co., Crowley 1	4	
Lavans & Co., Lavans 1	4	
Hazlewood Oil Co., Block 1, tract 44	3	
Block 1, tract 55	2	
Stebbins & Atwood, Hazeltine 1	2	

WEST VIRGINIA

Ritchie County—		
Kerr Bros. T. J. Owens 18	2	
David French, Alvin Payne 1	2	
American Oil Dev. Co., Abe Middleton 3	2	
Carnegie Nat. Gas Co., John Wilson 3	*	
W. A. Bickerstaff & Co., Fairview M. E. Church 1	¶1½	
E. E. Zinn & Co., M. Prunty 1	5	
Pittsburgh & West Va. Gas Co., A. H. McGill 1	¶1	
Spruce Oil & Gas Co., E. C. Wilson 2	¶1	
Lincoln County—		
Columbia Gas & Electric Co., G. P. Alderson 1	¶1	
W. G. Ratfield 1	¶1	
Cambridge Gas Co., J. L. Powell 2	¶1	
Roane County—		
Unted Fuel Gas Co., G. W. Gandee 1	¶2	
G. W. Gandee 2	¶2	
Elkins Oil & as Co., Fred Smith 2	¶2	
Doddridge County—		
Clifton Oil & Gas Co., Flora Freeman 14	5	
Nay & Knitzer, F. P. Dotson 1	*	
Clay County—		
South Penn Oil Co., O. D. Stockley 40	15	
Pleasants County—		
Ira Conolly & Co., Sol Holip 1	3	
Wood County—		
Fork S. Oil & Gas Co., C. F. Moore 1	2	
Lewis County—		
Mud Lick Oil & Gas Co. W. M. Watson 1	¶2	
Monongahela County—		
Pittsburgh & West Va. Gas Co., T. G. Moore 1	¶2	
Cabell County—		
J. S. Farr & Co., C. A. Weatherholp 1	*	3365

KENTUCKY

Cumberland-Monroe Counties—		
Wood, Haislett, McLennon & Co., Brockman 2	150	
Brockman 4	100	
Lawrence-Johnson Counties—		
Townsend & Garrison, J. N. Sparks 11	4	
F. Ferguson 5	6	
Swiss Oil Corp., Proctor Sparks 33	10	
Johnson-Magoffin Counties—		
Oliver Jenkins & Co., H. B. Adams Sr., 3	*	
Lee-Owsley Counties—		
H. B. Sipple, H. D. Parrish 3	5	
Floyd-Knott Counties—		
Ivyton Oil & Gas Co., Felix Allen 1	¶2½	
Estill County—		
Superior Oil Corp., Simp Horn 22	10	
Dudley Alexander 1	5	
Brenner & Adams, Thomas Mitchell 1	*	
Thomas Mitchell 2	10	
Wayne County—		
Davis & Co., Gregory-Ramsey 2	2	
Allen County—		
Mrs. Laura Spencer, Enocks 1	*	354
Warren County—		
C. P. Tannehill, George Perkins 1	*	430
Owensboro Field—		
Penn-Ind ana Oil Synd., B. D. Spurrier 1	20	
Simpson Hrs. 1	20	
Wood Oil Co., J. U. Bartley 2	20	
Butte Dredging Co., Allice Evans 4	1	
White Plains Oil & Gas Co., J. C. Ward 4	15	
Curson & Ellis, A. Martin 1	*	

SOUTHEASTERN OHIO

Washington County—		
C. H. Anderson & Co., Charles Rohrer 3	5	
Russell, Wright & Co., Fred Reynolds 1	*	
G. W. Kesselring, A. B. Little 20	5	
Margaret Good & Co., M. Good 1	5	
M. Good 2	*	
The Pure Oil Co., H. C. Webber 1	¶½	
L. B. Clymer & Co., W. Schramm 6	6	
McIntyre & Co., James Cooper 3	*	1120
Muskingum Gas Co., J. W. Breckenage 1	¶1	
T. P. Denning 2	¶1	
Robert C. Smith 4	¶½	
Herman Welch 1	1	
Leeper & Alexander, Jesse Thomas 4	¶¼	
Ohio Fuel Supply Co., C. E. Ormston 3	¶1¼	
J. G. Herlin & Co., Johnosn Noland 1	2	
Morgan County—		
The Pure Oil Co., H. C. Nicewanner 5	20	
R. A. Hughes 9	10	
Penn Contracting Co., Francis Smith 4	¶¼	
C. F. Sperry & Co., Anson McGraw 1	¶¼	
Noble County—		
J. T. Young & Co., George E. Radcliff 1	10	
Harrison County—		
Mitchell, Smylie & Co., Manda J. Palmer 2	2	

CENTRAL OHIO

Athens County—		
Clark & Co., John Dana 1	3	
J. A. Rohnhausan & Co., J. M. Wood 4	6	
Nezum & Co., L. M. Blackwell 1	*	
The Logan Gas Co., B. W. Barnhill 1	¶½	
W. O. Stout 3	¶¼	
F. A. Sweeney & Co., Daniel Ackerly 2	¶1¼	
Frank Selby, Lorenzo Lovell 2	*	
Nolan & Co., L. H. Blackwell 1	*	
Knox County—		
Arkansas Fuel Oil Co., L. V. Dugan 18	10	
East Ohio Prod. & Ref. Co., W. B. Heaton 1	*	
Guy Shafer, Joseph Chaney 1	7	
Jospeh Chaney 2	6	
The Pure Oil Co., A. L. Mizer 1	40	
Moore & Adams, P. L. & M. E. Wolfe 4	3	
Wehrle Interests, Burns 2	¶1	
Holmes County—		
The Pure Oil Co., Gladys Purdy 1	30	
Kenrow & Co., Jesse Cullens 1	60	
Leonard Oil & Gas Co., A. E. Patterson 1	¶2¼	
East Ohio Gas Co. W. H. Mohr 1	*	
Licking County—		
Ed. H. Everette Co. B. F. Mckee 2	125	
Guy Shafer Chaney Joseph 3	14	
Smith, Hazlett & Co. Austin Orr 7	¶¼	
Hocking County—		
Gordon Oil Co. James Noble 3	50	
Kachelmacher Estate Hogan-Murphy 1	6	
Perry County—		
Sunday Creek Coal Co. Fee 138	202	
Coshocton County—		
The Logan Gas Co. E. & O. Van Winkle 3	150	
Muskingum County—		
A. H. Heisey Gas Co. A. O. Mitchell 2	65	
Vinton County—		
Co-operative Oil Co. William Beckley 3	2	
Guernsey County—		
Wittmer Property, Trustee, James Caldwell 1	*	3640

NORTHWESTERN OHIO

Hardin County—		
Hardin Oil & Gas Co., A. R. Zimmerman 7	25	
Boston-Southwestern Oil & Gas. Co., I. C. Schick 1	15	
Hancock County—		
Denhoff Bros., E. Spahr 5	5	1417
Wood County—		
Oko O.l & Gas Co., George De-Verna 8	16	1291
Oko Oil & Gas Co., Charles Thaiss Jr. 4	6	1296
Wyandot County—		
South Bend Producers Co., S. Chesbrough 2	25	1462
Ottawa County—		
Ohio O.l Co., E. Neal 1	15	1995
Shelby County—		
Eilerman Oil Co., N. Simons 1	15	1267
Sandusky County—		
Haubert & Talbert, Talbert 9	5	1328
Lucas County—		
Ohio Oil Co., G. T. Niles 45	5	1421

INDIANA

Pike County—		
Chandler Oil Co., Mandy Williams 1	81	1408
Consolidated Oil Dev. Co., C. Atkinson 4	20	999
Jay County—		
N. T. Smith, I. Campbell 4	10	
C. Thompson, S. J. Bourne 1	*	
Huntington County—		
Canady & Wood, W. D. Bonifield 7	20	
Adams County—		
Chicago Oil Co., Armstrong 3	*	
Blackford County—		
Montpelier Dev. Co., Gerard 3	*	

ILLINOIS

Crawford County—		
Brenneman & McDonald, George Ziegler 7	10	
Selby-Cisler Producing Co., C. O. Reaville 50	2	956
Walter Squires & Co., G. P. Ford 9	1	959
Peoples Banking & Trust Co., W. W. Hall 13	1	1020
L. C. McDowell & Co., H. E. Hudson 1	*	
Clark County—		
J. T. Smith & Co., T. J. Ramsey 4	40	1601
The Ohio Oil Co., N. & K. Young 120	1	500
The Ohio Oil Co., J. Y. Smith 7	2	1447
W. C. McBride Inc., James Rush 25	*	1499
Wabash County—		
Mayhugh & Co., Hogan 9	60	1408
Breen Oil Co., Breen 3	60	1424
Ellison & Co., Collison 4	10	1437
Cumberland County—		
Huston & Co., J. B. Kelley 1	*	695
Huston & Co., J. Davis 1	*	740
Marion County—		
The Ohio Oil Co., H. W. Adams 1	5	1738
Coles County—		
Block Oil Corp., Earl Thrakill 1	*	
Jasper County—		
Wimsett & Co., E. Decker 1	*	872

MICHIGAN

Sagniaw County—		
The Sun Co., Dr. Bradshaw 1	25	1836
J. H. Shaltry & Co., Rinehardt 1	15	1827

(Note: Total completions, 210; production, 3019 barrels; 30 dry holes, 37 gas well, combined gas volume, 49,500,000 cubic feet.)

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WILDCATS FROM ALL SECTIONS

Northern California Wildcats

KERN COUNTY

ANTELOPE PLAINS—W. H. Davis' No. 1, dr 850 ft.

BUTTONWILLOW — Milham Exploration Co.'s Kern 1, dr 895 ft.

COMANCHE PT.—Kern Oil Co.'s No. 1, rigging to resume operations.

DEVILS DEN—Devils Den Prod. Co.'s No. 1, showing oil 1255 ft. Robins Oil Co.'s No. 1, dr 1956 ft.

FAMOSA DISTRICT — Woodward-Sheedy's No. 1, dr 2465 ft. Union Oil Co.'s No. 1, rigging rotary.

GOULDS HILLS — Medocino-Midway's No. 1, carring 7¼-inch cas. Myrtle F Oil Co.'s No. 1, pumping about 10 bbls oil 900 ft. L. E. Westrich's No. 1, dr 365 ft.

SHALE HILLS — Huntington-Hawthorne 1, lcn.

TEMBLOR HILLS—Foruna Oil Co.'s No. 1, locating water 2070 ft.

WASCO—Main Oil Co.'s No. 1, fsh 5304 ft.

EASTERN KERN—Crusaders Oil Co.'s No. 1, dr 2261 ft. Mackey 1A, abn 670 ft.

ELK HILLS—Interstate Oil Corp.'s No. 1, sd 5156 ft. North Elk Hills Co.'s No. 1, abn 4002 ft.

McKITTRICK FRONT — Lacy Esper Pet. Co.'s No. 1, sd 3275 ft. Ridge Oil Co.'s No. 1, testing 3075 ft.

SUNSET—Bell-Wrightsman's No. 1, testing 5335 ft. Fresno-Sunmaid's No. 1, sd 4200 ft. Gore Oil Co.'s No. 1, sd 2100 ft. Shell Co.'s KCL 1, dr 4745 ft.

FRESNO COUNTY

CLOVIS—Fresno-Madera Oil Co.'s No. 1, sd 3760 ft. W. W. Taylor's No. 1, dr 1355 ft.

HUKON—Associated Oil Co.'s No. 2, dr 1478 ft.

KEKMAN—Associated Oil Co.'s No. 1, abn 5735 ft.

RAISIN CITY—Fresno-United's No. 3, sd 3490 ft.

KETTLEMAN HILLS — Bolsa Chica Oil Co.'s Kettleman Hills 1, testing 2342 ft. Marland Oil Co.'s Elliott 1, dr 4619 ft. South Coalinga Oil Co.'s No. 1, sd 1390 ft.

VENTURA COUNTY

CAMARILLO—Standard Oil Co.'s Camarillo 1, dr 2920 ft.

CASITAS-OJAI — Miley Exploration Casitas 2, redr 607 ft. Star Pet. Co.'s Canet 1, rig completed.

MOORPARK-SIMI—E. A. Parkford's Lloyd 1, rigging rotary. Shell Co.'s Berlywood 1, dr 6510 ft.

PIRU—Henderson Pet. Corp.'s Z27, fsh 1162 ft. Oil Exploration Co.'s Janes 1, rigging rotary.

WHEELER CANYON—Wheeler Canyon Oil Co.'s No. 16, sd 4520 ft.

SESPE - FILLMORE — Gillette-Howard's Grant-Elkins, prepared to abn 4150 ft. Sespe Oil Co.'s Smith 2, sd 4003 ft. Sentinel Oil Co.'s Flats 1, sd 540 ft.

VENTURA—Associated Oil Co.'s McGonigle 1, sd, cemt 5312 ft. V. L. & W. 1, dr 4100 ft. Chanslor-Canfield's Hobson 1, fsh 5855 ft. Milham Exploration's Sexton 1, dr 5987 ft.

SANTA BARBARA COUNTY — Channell Oil & Dev. Co.'s No. 1, sd 4820 ft. Hollywood Oil Corp.'s Sudden, dr 900 ft. Miley Exploration Co.'s Goleta 1, hauling rig material. Summerland Oil Co.'s Becker 1, sd 2435 ft. Standard Oil Co.'s Palmer-Union 1, dr 2920 ft. West Penn Prod. Co.'s Shields 1, fsh 617 ft.

SAN LUIS OBISPO COUNTY — Arroyo Grande Pet. Co.'s No. 1, fsh 3920 ft. Barneyberg Oil Corp.'s No. 1, cemt 4486 ft. Geo. Mapes, Inc's No. 1, sd 500 ft. Paso Robles Oil Co.'s No. 1, dr 680 ft. Portland Pet. Co.'s No. 1, dr 2920 ft. Walkin Pet. Co.'s No. 1, dr 2412 ft.

MONTEREY COUNTY — Harriman-Jones Oil Co.'s No. 1, sd 4616 ft. Hennigan-Schweningan's No. 1, dr 3476 ft. Pan-American Pet. Co.'s No. 1, fsh 2638 ft. Pyramid Oil Producers' No. 1, dr 3082 ft.

TULARE COUNTY — Ducor Drilling Co.'s No. 1, sd, cemt 4161 ft. Josephone B. Neamer's No. 1, dr 2000 ft. Martin Pet. Co.'s No. 1, dr 1600 ft. Ozena Oil Co.'s No. 1, dr 300 ft. John Walklin's No. 1, bldg steel rig. Yolo Oil Co.'s Zimmerman 1, rig completed.

YOLO COUNTY—San Martinez Oil Co.'s No. 1, preparing to abn 6203 ft.

SONOMA COUNTY—Shell Co.'s Murphy 1, dr 2890 ft.

ALAMEDA COUNTY—J. E. Murney's No. 1, dr 1185 ft. Clahoma Oil Co.'s No. 1, sd 498 ft. H. J. Craig's No. 1, dr 656 ft. Thomas & Hammell's No. 1, dr 1085 ft.

CALOUSA COUNTY—Amalgamated Oil of Nev.'s No. 1, dr 2843 ft. Brown-Corkrill's No. 1, preparing to deepen 721 ft. Continental Oil No. 1, cas collapsed 3740 ft. Prize Oil & Gas Co.'s No. 1, sd 875 ft.

CONTRA COSTA COUNTY — W. M. Edwards' No. 1, sd 1605 ft.

HUMBOLDT COUNTY—Eureka Oil Co.'s No. 1, dr 2100 ft. Humboldt Oil Co.'s No. 1, will deepen 2270 ft. North Counties Oil Co.'s No. 1, dr 250 ft.

MERCED COUNTY—H. L. Kuhn's No. 1, dr 420 ft.

NAPA COUNTY — Berryessa Pet. Co.'s No. 1, dr 455 ft. Griffiths Oil Co.'s No. 1, sd 1985 ft. Ghesling & Riordan's No. 1, sd 1112 ft.

SACRAMENTO COUNTY — Central Pet. Co.'s No. 1, sd 3380 ft.

SAN BENITO COUNTY—Henry Harper's No. 1, sd 2195 ft. Homestake Oil Co.'s No. 1, dr 525 ft. Lang & Wall, Inc.'s No. 1, sd 520 ft.

SAN MATEO COUNTY—Craft & Ashton's No. 1, sd 1270 ft. Rollo Ellis' No. 1, sd 1260 ft. La Honda Oil Co.'s No. 1, redr 1066 ft, will test. Midstates Oil Co.'s No. 1, pumping about 6 bbls 2087 ft. San Mateo Oil Oil & Ref.'s No. 1, rigging up. Steel Bro.'s No. 1, waiting on cas 850 ft.

SANTA CLARA COUNTY—Alfred Tinnally's No. 1, sd 2365 ft. J. W. Tuck's No. 1, dr 185 ft.

SANTA CRUZE COUNTY—Danish Oil & Development Co.'s No. 1, dr 3050 ft. Mark Oil Co.'s No. 1, dr 375 ft. Santa Cruz-Lavega Trust's No. 1, dr 2330 ft.

STANISLAUS COUNTY — J. G. Tavares' No. 1, fsh 1706 ft.

SUTTER COUNTY—Sutter-Butte Oil Co.'s No. 1, sd 2900 ft.

YOLO COUNTY—Thos. M. Blake's No. 1, fsh 800 ft.

Southern California Wildcats

BANDINI — Pan-American Pet. Co.'s De-Baker 1, dr 1260 ft.

BELLFLOWER — Marine Oil Corp.'s well, sd 5284 ft.

BURBANK — Jeffries-Overton's Jefferies 1, sd 1300 ft.

BIXBY—National Security Co.'s No. 1, sd 5151 ft. Orange Co. Pet. Co.'s No. 1, sd 2820 ft.

CLEARWATER — Featherstone - Preston's Blinn 1, sd 4185 ft.

CLAREMONT—Claremont Oil & Gas Co.'s No. 1, co 1100 ft.

EAGLE ROCK — Calwin Oil Co.'s Eagle Rock 1, dr 6072 ft.

EL SEGUNDO—Rider Synd.'s No. 1, sd 2300 ft. Union Oil Co.'s Howland 1, dr 5238 ft. Southern California Drilling Co.'s Matteson 1, sd.

HAWTHORNE—Winwell Oil Co.'s Dome 1, making prod. test 5580 ft.

IRVINE—Calny Oil Co.'s Irvine 1, sd 4247 ft.

LAWNDALE—Smith Pet. Co.'s Johnson 1, dr 4710 ft.

LANCASTER—Rudd-Assmusen's No. 1, installing rotary 1859 ft.

LONG BEACH—Miller-Haley's Extension 1, sd 4865 ft.

MANHATTAN — Manhattan-Pacific's No. 1, sd 4409 ft.

MAYWOOD—Magnolia Pet. Synd.'s No. 1, re-dr 2700 ft.

NEWHALL-SAUGUS — Geo. W. Johnson's Wickham 1, building road. W. W. Stabler's No. 1, dr 2560 ft. Temple-Lefevre's Castaic 1, sd 2107 ft. Union Oil Co.'s Saugus 1, dr 4180 ft.

PACOIMA—W. O. Brubaker's Fernando, sd 2698 ft.

PLAYA DEL REY — Milham Exploration Co.'s Playa Del Rey 2, dr 6100 ft.

RESEDA—Petroleum Securities' Sesnon 1, dr 2400 ft.

SPADRA—Spadra Oil Co.'s Northey 1, sd 528 ft.

SAN FERNANDO—Standard Oil Co.'s University 1, cemt. 4229 ft.

SAN JOSE HILLS — Bardeen Oil Co.'s Didier 3, sd 1938 ft. D. & B. Oil Co.'s Amar 1, dr 3155 ft.

SAN JUAN CAPISTRANO — A. P. & K. Synd.'s No. 1, sd 2135 ft.

SOQUEL CANYON — E. L. Cragen's M&S 1, lcn.

SUNSET BEACH—Beach — General Pet. Corp.'s Lomita 1, building road.

TELEGRAPH CANYON—Quadra Pet. Co.'s MJM 1, dr 3980 ft.

TOPANGO CANYON—Standard Oil Co.'s Austin 1, dr 1655 ft.

VAN NUYS — Van Nuys Community Oil Co.'s No. 1, dr 3855 ft.

RIVERSIDE COUNTY—Banning Oil Co.'s No. 1, sd 974 ft. Corona Oil & Gas Synd.'s No. 1, dr 1190 ft. Spindle Top Oil Synd.'s No. 1, dr 2600 ft. Trabuco Oil Co.'s No. 1, dr 1670 ft.

SAN BERNARDIO COUNTY — Burgess-Goodale's Riggins 1, sd 4110 ft. Como Oil Co.'s Cajon 1, sd 1380 ft. Colton Terrace Oil Co.'s No. 1, dr 1111 ft. Del Rosa Oil Co.'s No. 1, sd 2420 ft. H. & P. Oil Co.'s Dome 1, co 1958 ft. Mahala Oil & Gas Co.'s No. 1, making gas tests 5080 ft. Rimer Oil Co.'s Rimer 1, pumping 10 bbls oil 723 ft. McDermott 1, dr 600 ft. Smith 1, sd 140 ft. Wade-Bourne-Aldhal's No. 1, dr 560 ft. Victor Valley Landowners' No. 1, sd 1740 ft. Western Pacific Oil Co.'s No. 3, dr 945 ft.

SAN DIEGO COUNTY—Cardiff Oil Corp.'s Turner 1, dr 850 ft. Oceanside Oil Well Co.'s No. 1, dr 3126 ft.

Mountain States

WYOMING
COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Eight Mile Dome—		
Texas Prod. Co.'s No. 1	*	2858
Geary Dome—		
Continental Oil Co.'s No. 1.....	*	3050

COLORADO

Archuleta County—		
W. Franklin's Interests' No. 1.....	*	1675

DRILLING REPORT
WYOMING

Akin Butte Oil Co.'s No. 1, La Barge, 22-27-113, dr 650 ft. Texas Prod. Co.'s No. 1, Quealy dome, 13-17-77, dr 2840 ft; No. 1, Eight Mile dome, 8-17-77, abn 2858 ft. Hockett Interests' No. 1, La Barge, 10-29-112, dr 1785 ft. Reese Oil Co.'s No. 1, La Barge, 27-27-113, dr 975 ft; No. 2, 2-26-113, sd 505 ft. Midwest Refining Co.'s No. 1, LaBarge, 21-27-113, dr 200 ft; No. 2, Notches, 3-37-85, dr 2760 ft;

No. 1, Dutton Creek, SE¼ 1-18-78, sd 4865 ft. Continental Oil Co.'s No. 1, Geary dome, 32-34-78, abn 3050 ft. Lake Valley Oil Co.'s No. 1, Eight Mile Lake, 14-20-88, dr 4615 ft. Texas Production Co.'s No. 5, Maverick Springs, 22-6-101, dr 675 ft; No. 1, Big Sand Draw, 15-32-95, sd 3075 ft; No. 5, Lost Soldier, 3-27-90, dr 1461 ft. Union Oil Co. of California's No. 1-A, Black Mountain, 34-43-91, dr 1768 ft; No. 1-B, Black Mountain, 28-43-91, co 2170 ft; No. 1C, Fremont County, 15-5-1, dr 1910 ft; No. 1SC, Fremont County, 10-28-92, dr 3857 ft; No. 1G, Fremont County, 27-1-1, dr 265 ft; No. 14, Maverick Springs, 15-6-2, dr 100 ft; No. 1, Park County, NE¼ 9-46-101, dr 1570 ft. Ohio Oil Co.'s No. 2, Byron, 33-56-97, sd 1280 ft; No. 3, Oregon Basin, 8-51-100, dr 1022 ft; No. 4, Oregon Basin, 8-51-100, cemented, td 600 ft; No. 3, Hidden dome, 31-48-90, fsh 2785 ft. Prairie Oil & Gas Co.'s No. 2, Buffalo Basin, 17-27-95, co, td 2435 ft; No. 1, Gooseberry, 32-47-100, dr 3635 ft. Producers & Refiners Corp.'s No. 5, Big Sand Draw, 10-32-95, dr 3315 ft; No. 2, Garland, 24-56-98, fsh 2490 ft; No. 1, St. Mary's 14-21-84, dr 525 ft; No. 2, Eight Mile Lake, 35-20-88, dr 3830 ft; No. 1, Baxter Basin, 11-19-104, dr 2455 ft; No. 9, Ferris, 11-26-90, dr 150 ft. Carter Oil Co.'s No. 2, Billy Creek, 17-48-82, dr 3930 ft; No. 1, Horse Creek, 35-17-70, dr 2612 ft; No. 1, Norwood, 5-48-90, dr 718 ft.

COLORADO

Gypsy Oil Co.'s No. 1, Garfield County, 5-8-102, dr 3545 ft. West Side Development Co.'s No. 1, Fort Collins, 5-8-69, dr 728 ft. Lyons Oil Trust Co.'s No. 1, Boulder County, 33-3-70, dr 1190 ft. Marland Oil Co.'s 1, Moffatt County, 16-3-91, dr 1935 ft; No. 1, Moffat County, 34-4-92, dr 1140 ft. Platte Valley Petroleum Co.'s No. 1, Weld County, 24-6-61, dr 1732 ft. Platte Valley Petroleum Co.'s No. 1, Weld County, 24-6-61, dr 1732 ft. Texas Production Co.'s No. 2, Rio Blanco County, 31-2-102, dr 2328 ft; No. 1, Moffet County, 27-31-94, dr 250 ft. Repollo Oil Co.'s No. 1, Boulder County, 33-1-70, ur 4175 ft. W. T. Morris Interests' No. 1, Moffat County, 22-12-100, setting 8-inch cas 2345 ft. Northwestern Colorado Oil Co.'s No. 1, Logan County, lcn. Elkhead Dev. Co.'s No. 1, Routt County, 4-7-86, dr 500 ft. E. J. Miley's No. 1, La Plata County, 32-33-12, dr 1135 ft. Continental Oil Co.'s No. 1, Jackson County, 12-9-79, dr 4115 ft. W. Franklin Interests' No. 1, Archuleta County, 28-35-2, abn 1675 ft.

NEW MEXICO

Texas Production Co.'s No. 1, Chaves County, 29-17-18, dr 1910 ft. Acme Oil Co.'s No. 1, Valencia County, 26-6-3, dr 775 ft. Congress Oil Co.'s No. 1, San Juan County, 34-29-11, dr 1675 ft. Hub Oil Co.'s No. 1, Valencia County, 13-6-2, dr 3065 ft. Decum Development Co.'s No. 1, Eddy County 5-17-28, trying to save as gas well, td 1319 ft. W. P. Cooper et al's No. 1, Lea County, 27-19-28, dr 360 ft. Inglefield Oil Co.'s No. 1, Lea County, 4-17-34, fsh 1375 ft. Ross-Bloomfield Royalty Co.'s No. 1, San Juan County, 11-29-11, dr 2350 ft. Utah Oil & Mining Co.'s No. 2, San Juan County, 8-29-9, fsh 3025 ft. Marland Oil Co.'s No. 1, Chaves County, 4-15-6, dr 1136 ft. Caprock Oil Co.'s No. 1, Lea County, 11-16-38, dr 253 ft. Portage Oil & Gas Syndicate's No. 1, San Juan County, 24-30-13, sdtr 2000 ft. Eureka Oil Synd.'s No. 1, Colfax County, 10-29-24, fsh 4080 ft. Santa Fe Petroleum Co.'s No. 3 San Miguel County, 3-13-15, sd 915 ft.

UTAH

Utah Petroleum Corp.'s No. 1, Gibson, 1-30-20, dr 155 ft; No. 1, Hulkito, 26-41-17, dr 333 ft. Midwest Exploration Co.'s No. 1P, Cane Creek, 32-26-91, ready to spd; No. 1H, Elk Ridge, 30-34-19, rigging up. Empire Gas & Fuel Co.'s No. 1, Gibson, 6-30-21, dr 155 ft. Utah Southern Oil Co.'s No. 1, San Juan County, sd 1045 ft.

Arkansas Wildcats

COMPLETION

Company, Well and Location	Initial Production Bbls.	Depth
Calhoun County—		
Delmar Oil Co.'s Gaibor 1, 16-11-14	*	3005

DRILLING REPORT

BRADLEY COUNTY—Arkansas Fuel Oil Co.'s Arkansas Lumber Co. 1, 25-16-12, lcn. Magnolia Pet. Co.'s Arkansas Timber Co. 1, 35-15-11, testing 2808 ft. McMurray et al's Southern 1, 7-15-11, washing 3205 ft. Phillips Pet. Co.'s Southern 1, 36-11-16, fsh 1620 ft. Wingfield et al's Southern 2, 2-16-12, dr 2925 ft.

CLEVELAND COUNTY — Kingsland Oil Co.'s Hall 1, 31-10-10, sd 1070 ft.

COLUMBIA COUNTY — Gulf Ref. Co.'s Huggins 1, 31-17-27, set 10-inch 276 ft. Haynes et al's Runyon 1, 3-16-21, rig. Ky-Ark Pet. Co.'s Doss 1, 29-19-20, dr 2500 ft. Scott Phillips' Davis 1, 6-18-20, sd 2000 ft.

DREW COUNTY—McClintock et al's Ogle 1, 35-13-5, fsh 2530 ft.

GRANT COUNTY—Jones & Watkins' Meek 1, 5-4-11, dk pat.

HEMPSTEAD COUNTY — Burton et al's Garland 1, 23-10-25, fsh 2210 ft. Myers et al's Nicholls 1, 17-11-25, sdtr 2260 ft.

JEFFERSON COUNTY — Decem Oil Co.'s Hensley 1, 7-3-10, dr 2550 ft.

LAFAYETTE COUNTY — Arkansas Fuel Oil Co.'s Allen 5, 18-19-24, set 6⅝-inch 2786 ft. Ken-Saw Pet. Co.'s Red River 2, 3-20-24, testing 4½-inch 2810 ft.

LITTLE RIVER COUNTY—Greeson et al's Waldrip 1, 4-13-21, sd 1740 ft. Grote et al's Allen 1, 2-13-29, set 5 3/16-inch 2940 ft. Johnson et al's Hawkins 1, 10-11-31, dr 1900 ft.

MILLER COUNTY—Lenze et al's Dale 2, 28-15-26, set 10-inch 100 ft.

NEVADA COUNTY—Greeson et al's Tidwell 1, 22-13-21, sd 1200 ft. Humble O. & R. Co.'s Bodcau 4, 9-15-22, dr 3010 ft.

OUACHITA COUNTY — Grayson et al's Reynolds 1, 21-14-17, dk. Reynolds et al's Cortier 1, 2-14-18, testing 1473 ft. Van Diver et al's Yarbrough 1, 22-14-17, dr 1660 ft.

UNION COUNTY—Belmont et al's Hollis 1, 15-18-15, dr 625 ft. Grimes & Jones' Van Hook 1, 8-18-14, dr 1370 ft. Imperial O. & G. Co.'s Goodwin 1, 26-17-16, set 4½-inch 3078 ft. Mathews et al's Lewis 1, 14-19-12, set 6⅝-inch 2650 ft. Marine Oil Co.'s Thompson 1, 10-18-13, dr 60 ft. H. O. Mullen Trust's Hill 1, 10-18-16, rig. Natural G. & F. Corp.'s Cordell 1, 9-18-13, to core 2954 ft. Simms Oil Co.'s Simmons 1, 9-18-13, coring 2944 ft. Thorpe et al's Peck 1, 22-18-13, dr 1000 ft. Walber et al's Cordell 1, 6-18-13, sd 2984 ft.

Louisiana Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Caddo Parish—		
Gulf Ref. Co.'s Byrd 1, 2-19-14 ...	*	3903
Caldwell Parish—		
Southern Crude Oil Purchasing Co.'s Caldwell Lumber Co. 4, 13-13-5e..	*	506
Claibrone Parish—		
Shaw et al's King 1, 20-21-8	*	2255
La Salle Parish—		
Cherokee Pet. Co.'s Louisiana Central Lumber Co. 3, 33-11-3e	*	1805
Natchitoches Parish—		
Ohio Oil Co.'s Louisiana Long Leaf Lumber Co. 1, 20-8-8w	*	2903
Weaver Bros.' Fee 1, 4-7-7	*	2420
Richland Parish—		
Roxana Pet. Co.'s Tensas Delta Lumber Co. 1, 3-14-5e	*	2011

DRILLING REPORT

BIENVILLE PARISH — Collins & Woodley's Thomas 1, 23-16-10, set 6-inch 2548 ft.

BOSSIER PARISH — Collins & Woodely's Roberson 1, 22-23-12, lcn. Doern et al's Bolinger 1, 9-22-11, sw 2684 ft. Tubbs et al's Jacobs 1, 26-20-13, rig.

CADDO PARISH—Dixie Oil Co.'s Jolley 1, 27-22-15, dr 4380 ft. Magnolia Pet. Co.'s Bradford 1, 24-21-15, dr 3825 ft; Dillion 16, 24-21-15, dr 3600 ft; Dillion 17, 24-21-15, sw 3589 ft; Spell 1, 19-21-15, sd 2553 ft. The Texas Co.'s C. M. L. 42, 23-21-15, pulled 4½-inch cas 3780 ft.

CALDWELL COUNTY — Robbins et al's Beazley 1, 10-11-4e, sd 1020 ft. Roxana Pet. Corp.'s Louisiana Central Lumber Co. 1, 22-12-3e, dr 1435 ft. Southern Crude Oil Purch. Co.'s Caldwell A-5, 23-13-5e, rig. Victor Wenzel's Caldwell 1, 22-14-4e, rig. Wright et al's Love 1, 16-11-2e, sd 1625 ft.

CLAIBORNE PARISH — Brown et al's Heard 1, 28-19-5, sd 2500 ft. Gilliland Oil Co.'s (Ramsey) Taylor B-10, 14-23-8, coring 4800 ft. Triangle Drilling Co.'s Keen 1, 7-19-5, sd 4602 ft.

DE SOTO PARISH—Alden Oil Co.'s Powell 1, 13-11-10, sd 1197 ft. Craige & Montze's Riggs 1, 28-15-13, sd 1380 ft. Dixie Oil Co.'s Jenkins 1, 9-12-11,sd 4863 ft. Helm et al's Joyner 1, 28-11-12, sd 30 ft. Snapp et al's Flores 1, 27-11-11, dr 2725 ft.

EAST CARROLL PARISH—T. A. Snell's Gordon 1, 34-20-12e, junked 1494 ft; skidding rig.

FRANKLIN PARISH — R. W. Williams' Elkhart-Lemon 1, 17-14-8e, set 10-inch 68 ft.

GRANT PARISH—Billeaud et al's Ball 1, 19-7-1e, sd 150 ft. Gulf Ref. Co.'s Swope 2, 17-9n-1e, sw 1610 ft. Holmes et al's Holmes 1, 17-9-1e, dk; Holmes A-1, 17-9-1e, dk pat. J. L. Holmes' Fee 2, 17-9-1e, dk. Humble O. & R. Co.'s L. & A. Oil Co. 11, 29-9n-2w, lcn. Keen & Woolf's Rider 1, 16-9n-1e, dr 1670 ft. J. J. Long's Calhoun 1, 4-7-4w, sd 1285 ft. Tunica Pet. Co.'s L. & A. Oil Co. 8, 11-8-2w, sd 250 ft; L. & A. Oil Co. 9, 3-8-2w, dk; L. & A. Oil Co. 10, 8-8-1w, dk.

JACKSON PARISH—El Dorado Chief Oil Co.'s Jones 1, 3-14-4w, dr 2400 ft. Ferguson Trust's Martin 1, 3-15-1e, dr 2515 ft. Grigsby & Co.'s Adams 1, 22-17-4w, dr 2200 ft. Houseman et al's Norton 1, 34-15-3w, sd 400 ft. Louisiana Pet. Co.'s Theus 2, 12-16-3w, rig. Raymond et al's Davis 1, 13-16-2e, rig.

LA SALLE PARISH—Tunica Pet. Co.'s L. & A. Oil Co. 12, 17-7-5e, dr 2270 ft; L. & A. Oil Co. 13, 25-8-1e, sd 1650 ft.

LINCOLN PARISH — Arkansas Fuel Oil Co.'s Nobles 1, 18-19-3w, lcn. Buckley & Palme 's Davis 1, 12-20-3w, 2555 ft.

NATCHITOCHES PARISH — Brothers et al's Cockfield 1, 78-7-5w, sd 1866 ft. Davidson et al's Louisiana Long Leaf 1, 21-7-9, dr 900 ft. Forrest Trust's Ayers 2, 3-13-7, sd 1900 ft. Gulf Ref. Co.'s Louisiana Long Leaf A-1, 39-7-7, rig. Keator et al's Prudhomme 1, 96-8-6w, dr 1475 ft. McCormick et al's Russell 1, 41-10-7, coring 3950 ft. Ohio Oil Co.'s Louisiana Long Leaf Lumber Co. 2, 20-8-8w, rig. J. F. Palmer's Edenborne 1, 4-11-6, sd 2015 ft. E. Self's Fisher 1, 18-8-9w, coring 1635 ft.

OUACHITA PARISH — Ouachita Natural Gas & Oil Co.'s D'Arbonne 2, 25-19-2e, coring 2300 ft.

RAPIDES PARISH—Hincy & Mack's Barrow 1, 29-5-2e, dr 2720 ft. Minnesota Oil Co.'s Wattermark 1, 7-5-3w, sd 600 ft. Libuse Oil & Gas Co.'s Voda 1, 12-4-1e, dr 1400 ft. Seip et al's Ball 1, 41-4-2w, sd 2050 ft.

RICHLAND PARISH—Gulf Ref. Co.'s England 1, 32-17-6e, dr 680 ft; Weyman 1, 23-18-8e, dr 2490 ft. Roxana Pet. Co.'s Humble 1, 10-14-6e, rig.

SABINE PARISH—Emlet et al's Bowman-Hicks 5, 8-7-12, testing 4070 ft; Bowman-Hicks 7, 11-7-14, sd 2120 ft; Sabine Lumber Co. 1, 8-7-1e, dk. Godchaux et al's Mills 1, 12-4-13, set 10-inch 85 ft. Magnolia Pet. Co.'s Louisiana Long Leaf 1, 16-6-11, dr 1620 ft. Reliance Co.'s Wyatt 1, 23-5-12, rig.

UNION PARISH—Camette et al's Tudwell 1, 21-22-1e, dk. Clark Pet. Co.'s Frost-Johnson 1, 18-23-1e, sd 2240 ft; Frost-Johnson 2, 8-23-1e, rig. Gulf Ref. Co.'s Nelson 1, 5-19-1, dr 1925 ft.

WEBSTER PARISH—Humble O. & R. Co.'s Cox 1, 22-21-10, set 6⅝-inch ft 4620 ft. Labore et al's Bruner 1, 30-19-10, sd 278 ft. Smitherman & McDonald's Oakley 1, 29-23-11, dr 4815 ft. Southern Crude Oil Purch. Co.'s Munn-Wadley 1, 1-22-10, fsh 4620 ft.

WINN PARISH—Allen Drilling Co.'s Sanders 1, 21-13-2w, sd 1511 ft. Cedar Creek Pet. Co.'s Sullivan 1, 6-10-2w, sd 1700 ft. Dodge et al's Tremont 1, 35-13-3w, rig. Humble O. & R. Co.'s Grant Lumber Co. 1, 28-9n-3w, dr 885 ft. Hyde & Nelson's Louisiana Central Lumber Co. 1, 16-13-1w, dk. J. C. Long's Milam 1, 28-13-3w, fresh water 474 ft. Ohio Oil Co.'s Edenborne 1, 4-12-1w, dr 2505 ft.

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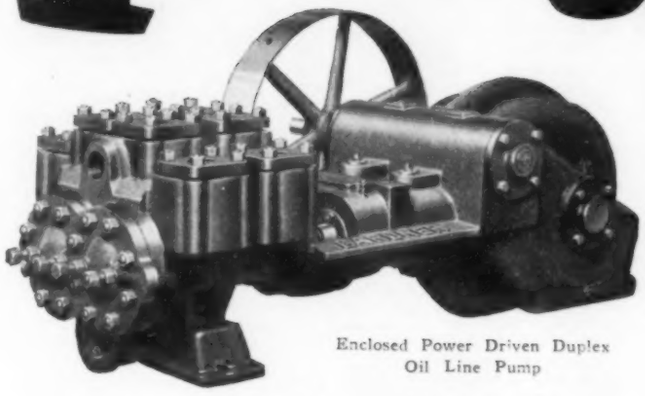
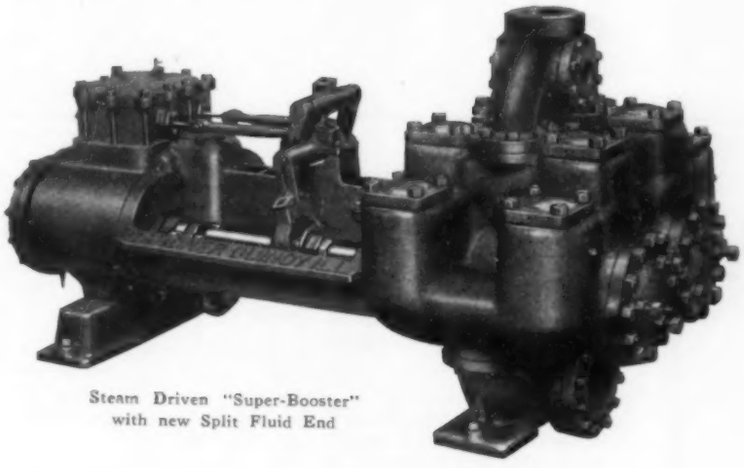


Enclosed Power Driven Duplex Oil Line Pump



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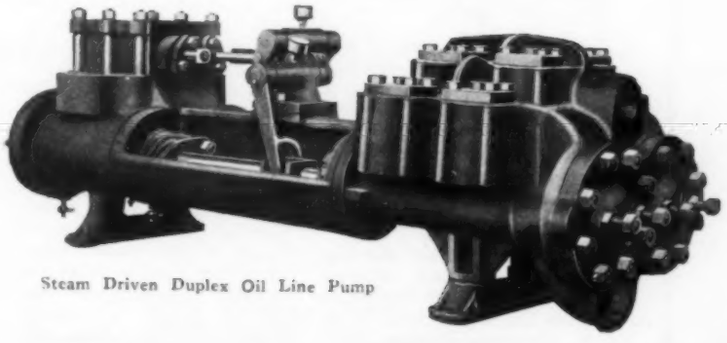

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GARDNER

Say you saw it in The OIL WEEKLY

Kansas Wildcats

BARBER COUNTY—Skelly et al's Richardson 1, SWc 30-30-14, dr 4425 ft. Vickers Pet. Co., Ott 1, SWc 30-32-14, dr 4275 ft. R. B. Brown's Martin 1, NWc 14-34-11, sd 1500 ft. Shaffer O. & G. Co.'s Alexander 1, C SE 13-33-13, dr 3250 ft.

BARTON COUNTY—Huffin et al's Smith 1, NE SE NE 17-19-11, sd 5100 ft.

COWLEY COUNTY—Branson et al's White 1, SEc SW SW 7-30-6, sd 1560 ft.

KINGMAN COUNTY — Phillips Pet. Co.'s Hempell 1, C SE 9-27-6, sd 4025 ft. Harwood & Winters' Lindholm 1, C NE 22-28-5, sd 4026 ft. Crawford and McKenna's Beshere 1, NEc NW 30-28-5, ur 4180 ft. Marland Oil Co.'s Padgett 1, NEc SW 11-28-6, dr 3378 ft. Fleeger et al's Greenleaf 1, NEc 13-28-7, ur 3880 ft. Cassody Oil Corp.'s Yeoman 1, C SE 35-28-7, dr 4320 ft. Phillips Pet. Co.'s McKenna 1, C NW 16-28-8w, sd 4030 ft. Ozark Drilling Co.'s Richards 1, SEc NE SW 4-30-6, sd 4252 ft. Vickers & Stearns' Keimig 1, C NW 35-30-9, dr 3720 ft. Eben Pyle's Wooleey 1, NE SE 20-27-7, lcn.

LYON COUNTY—Sulp et al's No. 1, SWc SE 25-19-10, spd. Gasche & Ballier's Stratton 1, SEc NW 32-20-13, dr 1800 ft.

RENO COUNTY—Sheldon et al's Hangason 1, SEc NW 10-23-4, dr 3065 ft. Marland Oil Co.'s O'Neil 1, C SW 7-23-6, cellar. Fleeger et al's Neeley 1, SEc NW 35-23-7, ur 2170 ft. Miss. Valley Oil Co.'s Pexroad 1, SEc NW 25-23-7, dr 3719 ft. Cassody Oil Co.'s High 1, C SE 9-25-7, dr 3790 ft. Frank Hopper's Stevens 1, NWc 7-26-7, dr 4294 ft.

RUSSEL COUNTY—Mid-West's Dortland 1, SE SE NW, 5-14-15w, dr 2510 ft. Keys Pet. Co.'s Sloan 1, C SE SW SE 3-13-15, dr 1425 ft. Wilcox Russell's Wilson 1, SE SW 14-12-13, dr 2100 ft.

SUMNER COUNTY—Stalling et al's Rice 1, C NE NE NW 3-32-2, sd 3812 ft.

SEWARD COUNTY—Wilson et al's Son 1, C NE NE NE 14-33-33, spd.

Oklahoma Wildcats

BECKHAM COUNTY—Magnolia's No. 1, NEc 21-9-23, lcn; No. 1, NEc SE NE NW 29-9-23, dr 535 ft.

CADDO COUNTY—W. J. Hartley's Calbreath 1, SEc NW SE 29-5-12, dr 3110 ft. Abernathy's No. 1, C NE NW 8-5-11, lcn; No. 1, C SW NW 23-5-11, dr 785 ft.

CIMMARRON COUNTY — Ramsey Bros.' No. 1, C NW NE 27-5-5, dr 1532 ft. Fenton, Brookins et al's Smaltz 1, SEc NE NE 2-2-9, spd.

COTTON COUNTY—J. A. Heacock et al's John 1, NWc NE 21-1-10, abn 2427 ft.

COMANCHE COUNTY—Cherry & Couch's Ritchie 1, NWc SW 19-2-9, sd 1882 ft. Mid-Kansas O. & G. Co.'s Cox 1, NEc SE NE 30-1-13, fsh 1920 ft.

GARFIELD COUNTY—Sinclair's Meyers 1, C SE NE 11-24-4, dr 3355 ft. Shaffer & Amerada's Bunker 1, NEc 32-24-4, set 6-inch 4551 ft. Haley, Garber & Pulse's Chevekier 1, NWc SW 6-23-4, ur 6-inch 3880 ft. Bu-Vi-Bar's Johnson 1, SWc 31-23-4, dr 4395 ft. Sinclair's Fee 1, SWc SW NE 2-20-5, dr 4400 ft.

GRANT COUNTY — Amerada Pet. Corp.'s White 1, NWc SW 22-29-3w, lcn. Ostot Dev. Co.'s Snyder 1, NEc 6-28-3w, dr 4125 ft. Barzell & Moses' Royce 1, SWc NW 34-26-4, sd 550 ft. Dedman, Flanngan & Hennage's Sherran 1, NEc SW 16-26-3, sd 1910 ft. Gypsy Oil Co.'s Meugge 1, SEc NW 33-26-3, dry.

HUGHES COUNTY—Sand Pet.'s Harnage 1, C SE SE SE 10-8-9, co 3340 ft. Magnolia Pet. Co.'s Medore 1, NWc SW 28-8-9, dr 3470 ft. Sorry and Swartz's Wallace 1, SEc NW SE 4-8-11, dr 3385 ft. Johnson et al's Bear 1, SWc SE NW 32-8-11, pb 1515 ft.

KIOWA COUNTY—A. C. Varner's Boham 1, SEc SW NW NW 5-6-19, sd 1127 ft.

KINGFISHER COUNTY—Marland Oil Co.'s No. 1, SWc NW 12-18-5, dr 3985 ft. Pet. Eng. Core Drilling Co.'s Canfield 1, C NW SE 6-16-7, rig. McKenna & Crawford's Sturgeon 1, NEc SW 27-16-6, dr 1521 ft. Hoffman et al's Otie 1, NWc NE 20-15-8, rig down. Reiter & Foster's Davidson 1, SWc 23-15-5, rig.

KAY COUNTY—Tom Palmer et al's Barclay 1, NEc NW 28-26-1w, dr 3765 ft. Ponco Lee Oil Co.'s McNeal 1, NE 32-26-2, fsh 2360 ft. Tonkawa Dev. Co.'s McDaniels 1, C SE SE SE 15-25-1, fsh 1140 ft. Marland Oil Co.'s School land 1, NEc NW 13-25-2, pulling 5-inch cas.

LINCOLN COUNTY — Wentz Oil Corp.'s Lukenbeal 1, SWc SE 34-17-2, dr 2800 ft. Mid-Kansas Oil & Gas's Griswold 1, NEc NW 33-17-4, dr 3910 ft. Olean Pet. Co.'s Morris 1, SEc NW NE 18-16-4, dr 4110 ft. Wilcox O. & G. Co.'s Lillibridge 1, NEc NW 25-15-3, sd 4764 ft.

LOGAN COUNTY—Brayn & Emery's Scott 1, NWc SE 33-19-4, rigging up. Carter Oil Co.'s Rogers 1, SWc NW 32-19-3, dr 3841 ft. Franklin Oil Assn.'s Moore 1, SWc SE 28-18-4, cementing 6-inch 3932 ft. Santrock Drilling Co.'s Mathews 1, SW SE 11-18-3, rig. Haley & Pioneere's Quair 1, SWc SE 11-18-3, rig burned. Zingery et al's Baker 1, NWc NE NE 5-17-1, std 3500 ft. T. B. Slick's Berry 1, SWc SE 28-17-1, cementing 10-inch 2399 ft. Balchford O. & G. Co.'s Liar 1, C S L N½ SE 28-16-1, sd 1675 ft.

PAYNE COUNTY — Twin State Oil Co.'s Tibler 1, NEc NW NE 23-18-1, cementing cas 1590 ft.

LOVE COUNTY — Schermerhorn-Ardmore's Dillard 1, SEc NE NW 25-6-2, dr 3250 ft.

NOBLE COUNTY—Geo. Miller's 101 Ranch 1, NEc 1-24-1, fsh 4300 ft.

OKFUSKEE COUNTY — T. A. Johnson's Leedy 1, NEc SE SE 25-12-9, dr 850 ft. J.

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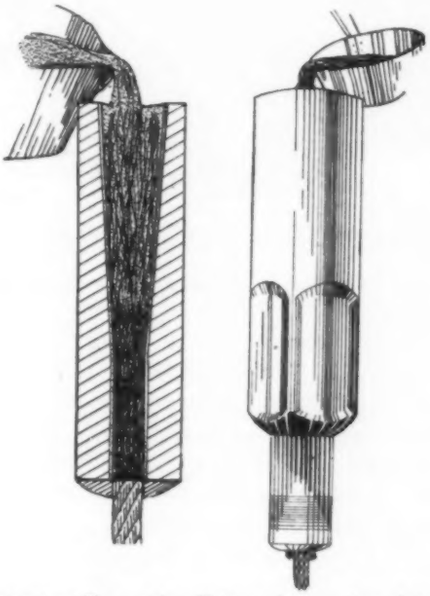

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M. Kessler's Scout 1, SWc 8-12-11, sd 200 ft. J. W. McCullough's Carolina 1, NE NW SE 17-10-9, co 3391 ft.

POTTAWATOMIE COUNTY — Shaffer et al's Ives 1, NWc SE SE 12-10-3, sd 3620 ft. McCullough's Madgett 1, NWc 25-10-4, sd 4105 ft. Tidal Osage's Kenyon 1, SWc SE SE 3-8-4, dr 4085 ft. Davis Detrick's McGathy 1, SEc NW 10-6-2, fsh 4550 ft. Magnolia's Fyke 1, NWc NW 20-7-5, cementing 8-inch 3330 ft. I. T. I. O. Co.'s School land 1, SEc SW 16-8-5, rog.

SEMINOLE COUNTY — Carter Oil Co.'s Hajocke 1, NEc NW NW 26-10-6, dr 2220 ft. Superior Oil Co.'s Noble 1, SEc SW SE 10-9-6, dr 2740 ft. Pure Oil Co.'s Joah 1, C E L NW NE 15-9-7, cementing cas 2952 ft. Champlin & Bass's Sewell 1, NE SE SW 15-8-8, dr 2995 ft. Magnolia Pet. Co.'s Strouther 1, SEc NW 17-8-6, run 10-inch 1713 ft. Empire G. & F. Co.'s Litka 1, SWc SW 3-7-6, dr 3638 ft. I. T. I. O. Co.'s Litka 1, C NE NE 9-7-6, sd 2781 ft. Magnolia's Jackson 1, SWc NE 22-7-7, dr 2635 ft.

TILLMAN COUNTY—Ossie Drilling Co.'s Snelling 1, SEc SE SE 13-1-18, sd 1525 ft.

TEXAS COUNTY—Valeriur O. & G. Co.'s No. 1, NWc SW 18-3-12, set 8-inch 3050 ft; No. 2, SEc SE 32-5-12, sd 3521 ft. H. F. Wilcox's Zea 1, SWc SE 29-3-12, fsh 3045 ft. Hovey 1, SEc SE 21-4-14, ur 3710 ft. Foster-Reiter's No. 1, SEc SW 9-3-15, dr 3290 ft. Haley, Garber & Pulse's Ellison 1, NWc SE SE 4-1-12, dr 1820 ft. Reiter-Foster's Kugle 1, C NE 10-2-11, dr 3445 ft. Connell et al's Tansey 1, SEc NW 5-1-19, spd and sd.

West Texas Wildcats

COMPLETIONS

Company, Well and Location		Initial Production Bbls.	Depth
Crane County—			
Cranfill Bros. Oil Co.'s P. J. Lea 1	*		3510
Crockett County—			
F. P. Zoch et al's University 1	*		2005
Ector County—			
Simms Oil Co.'s W. P. Edwards 1	*		3730
Reagan County—			
Simon-Hoffman et al's R. A. Walters 1	*		3110
Upton County—			
W. W. Donnelly & Gerke's Rankin 1	*		3950

DRILLING REPORT

ANDREWS COUNTY—Amon G. Carter & Zweifel's Cowden 1, rig. Maer-Staniforth et al's W. S. Taylor 1, lcn. Henry Zweifel et al's Means 1, lcn.

BREWSTER COUNTY—Green Valley Oil Corp.'s J. P. Wilson 3, spudding. Roseborough et al's Skinner 1, ur cas 1290 ft.

COKE COUNTY—Lipan Oil Co.'s C. E. Rawlings 1, flowing sulphur water 2700 ft.

CONCHO COUNTY — Culbertson Bros. & Co.'s W. G. See 1, dr 1260 ft. Eugene Mays et al's Wilson-Hartgrove 1, sd 965 ft. The Exploration Co.'s Hartgrove 1, sd 850 ft. K. Kimberlin et al's Schultz 1, sd 1570 ft.

CRANE COUNTY—Cranfill Bros. Oil Co.'s Lee 1, dry 3510 ft. Duffey Bros. et al's Cowden 1, elevation 2461 ft, top salt 752 ft, dr 1200 ft; Griffith 1, lcn. Bill Dunning et al's Crier-McElroy 1, elevation 2582 ft, top salt 958 ft, sd 2710 ft. Gulf Prod. Co.'s University-Lassiter 1-A, dr 885 ft; J. T. McElroy 2-A, skidded 50 ft west, spudding; Crier-McElroy 1, sd storage 2675 ft; Crier-McElroy 2, co to drill in, td 2680 ft; Crier-McElroy 3, sd storage 2691 ft. Independent Q. & G. Co.'s Hughes 1, sd 2264 ft. Magnolia Pet. Co.'s University-Hardwick 1, dr 345 ft; University-O'Keefe 2, dr 1050 ft; University-Lassiter 1, rig. Magnolia et al's University-Church 3, lcn. Marland Oil Co.'s Cowden 1-A, dr 160 ft; Dawson 1, top salt 670 ft, dr 1935 ft; Durham 2, dr 200 ft; Durham 3, rig; Hughes 2-C, co after shot 120 qts. 2287-2313 ft, td 2323 ft; Hughes 3-C, testing oil pay 2316 ft; Hughes 4-C, rig; Huhes 2-D, rig; Hughes-Gibbs 2, rig; Gibbs 1, plugging back water 2333 ft. Prairie O. & G. Co.'s University 1 and 2, rigs; University-Collett 1, lcn. Ben D. Simon et al's Brookfield 1, rig. The Texas Co.'s King 6, swab 75 bbls after shot 2305-52 ft; King 7, swab 80 bbls after shot 90 qts. at 2304-30 ft; King 10, 11 and 12, rigs. Tidal Oil Co.'s University 2, spudding; University 3, rig. Henry Zweifel et al's Cowden 1, rig.

CROCKETT COUNTY—Cranfill Bros. Oil Co.'s Harris 1, spudding. Cumberland Oil & Gas Co. et al's Couch 1, dr 2005 ft. Gulf Prod. Co.'s Powell 1-D, dr 1715 ft. J. K. Hughes Dev. Co.'s Powell 2-A, elevation 2795 ft, top salt 1150 ft, dr 1630 ft; Powell 3-A, dr 2295 ft; Powell 2-B, dr 2316 ft. Humble & Marland Oil Co.'s Powell 1-B, dr 690 ft. Magnolia Pet. Co.'s Shannon 2, rig. Republic Prod. Co.'s L. P. Powell 1, dr 2440 ft. Wm. Schaffer et al's University 1, sd 2191 ft. Ben Simon & Cromwell's Shannon 1, dr 2650 ft. Young & Cromwell's Shannon 1, fsh 500 ft. F. P. Zoch et al's University 1, plugged 2005 ft. Wilcox O. & G. Co.'s University 1, dr 4570 ft.

CULBERSON COUNTY—Big Lake & Plymouth Oil Co.'s C. L. Cass 1, sd 350 ft. James H. Gardner et al's Radford-State 1, rig. Pure Oil Co.'s TP Fee 1, dr 115 ft.

JEFF DAVIS COUNTY—Herbert Oil Co.'s T. M. Wingo 1, sd 3012 ft. Humble O. & R. Co.'s McCutcheon 1, sd 3120 ft. J. K. Hughes Dev. Co.'s J. Z. Means 1, dr 605 ft; Means 2, lcn.

ECTOR COUNTY—J. S. Cosden et al's G. W. Connell 1-A, elevation 2847 ft, top salt 875 ft; top lime at 3170 ft or 3235 ft, swabbing 35 gravity oil from lime 3465-95 ft; Connell 1-B, elevation 2827 ft, top salt 1000 ft, top big lime 3390 ft, co 3770 ft. The Exploration Co.'s TP Fee 1, top salt 1528 ft, dr 3740 ft; J. D. Slator 1, rig. Llano Oil Co.'s Cowden 1, top salt 1130 ft, sd 3508 ft. Simms Oil Co.'s Edwards 1, dry 3730 ft. Taliaferro & Sid Richardson's Henderson 1, elevation 2974 ft, top salt 1135 ft or 1165 ft, dr 2960 ft.

FISHER COUNTY—Ideal Oil Co.'s W. F. Martin 1, oil exhausted or cased off, dr 3395 ft. R. W. Rainy et al's J. L. Marberry 1, sd 1502 ft. Clark-Baldridge & Dillard's Wheeler 1, lcn.

GARZA COUNTY — Emerald Oil Co.'s Boren 1, making small oil production 2600 ft.

GLASSCOCK COUNTY — Marland Oil Co. et al's Calder 1, dr 2150 ft. Plateau Oil Co.'s L. S. Bell 1, dr 1060 ft. Texon & Marland's Settles 1, lcn.

TOM GREEN COUNTY—M. D. Bryant et al's Llano County Fee 1, cas trouble 2980 ft. Texon & Marland Oil Co.'s Sorrell 1, dr 910 ft. World Oil Co.'s Pulliam 1, ur 3417 ft.

HOWARD COUNTY — Humble O. & R. Co.'s Douthitt 1, dr 610 ft. Lockhart & Co. et al's Roberts 1, ur 10-inch cas 710 ft; Chalk 1-A, dr 1080 ft; W. T. Scott 1, set 6⅝-inch cas 1995 ft. Magnolia Pet. Co.'s Mary Chalk 1, dr 1150 ft; Otis Chalk 3, dr 1190 ft; Chalk 4, lcn; Chalk 3-A, changing from rotary to star machine, td 1582 ft; Chalk 4-A, spudding rotary. Marland Oil Co.'s Otis 3, sd 1333 ft; Chalk 4, sd for star machine, 1122 ft. Reeves-Apperman et al's Clay 1, sd 930 ft.

IRION COUNTY — F. Tankersley et al's Edwards 1, abn 320 ft.

JONES COUNTY—Bateman-Campbell et al's Southard 1, lcn. Cole-Hart et al's W. B. Cranston 1, lcn. Hucony Gas Co.'s (Gibson-Johnson) Wright 1, dr 770 ft; Sears 1, dr 540 ft. Gillette & Hickey's S. W. King 1, dr 1585 ft; Young 1, sd 360 ft. Marland Oil Co.'s S. R. Cox 1, show oil 2028 ft, dr lime 2050 ft; Harris-Mason 1, dr 1670 ft. Mid-West Exploration Co.'s Thornton 1, sd 550 ft. Muse-Robertson's Manley 1, lcn. Victor H. Martin et al's Culbertson 1, lcn. Phillips Pet. Co.'s Walling 1, dr 280 ft. L. Taliaferro & Wentz Oil Corp.'s King 1, show oil 1623-25 ft, ur 1945 ft. World Oil Co.'s Boney & Stanford 1, lcn.

KENT COUNTY—The Texas Co.'s Barron 1, ur 5 3/16-inch cas 4360 ft.

KIMBLE COUNTY—Dixie Oil Co.'s Harrison 1, dr 1160 ft.

LOVING COUNTY — Duffey Bros. & Arnold's W. D. Johnson 1, lcn. Lockhart & Co.'s R. L. Allen 1, dr 3600 ft.

LYNN COUNTY — Hart Oil Corp.'s Edwards 1, sd 1390 ft.

MENARD COUNTY—J. R. Lewis et al's White 1, dr 185 ft. Clark et al's Kothman 1, dr 240 ft. Robinson-Dyer & Cobb's Wilhelm 1, lcn.

MITCHELL COUNTY—Magnolia Pet. Co.'s Mary Foster 2, fsh 1510 ft. Mid-Kansas O. & G. Co.'s Ellwood 2, dr 2010 ft. Morrison-Thompson's Griffith 1, lcn. Owen-Sloan Oil Co.'s C. P. Conway 1-A, dr 2980 ft. Teas-Stivers' Hardee 1, fsh 475 ft. F. P. Zoch et al's J. J. Ford 1, dr 2430 ft.

NOLAN COUNTY — Hucony Gas Co.'s Arthur Sears 1, elevation 1950 ft, flowed sulphur water at 2500 ft, dr 2660 ft. Henry Zweifel & Hofmeier's Longbotham 1, spudding.

PECOS COUNTY — Benedum-Trees' J. C. Trees 1, sd 460 ft. Cromwell & Kimberlin's Scharff-Blackman 1, spd and sd. J. G. Buell-Hagan et al's So. Life Ins. Fee 1, fsh 575 ft. Dixie Oil Co.'s Mrs. Hersheusen 1, elevation 3282 ft, sd in sand 5346 ft. Mid-Kansas O. & G. Co.'s I. G. Yates 1, spudding. Transcontinental Oil Co.'s Perry 1, crooked hole 3535 ft. Quinby Oil Co.'s Bennett 2, spd and sd; Townsite 1, dr 3300 ft.

PRESIDIO COUNTY — Hadlock-Miller et al's Tootle 1, sd 2255 ft.

REAGAN COUNTY—H. D. Camp et al's University 1, sd 2786 ft. Cope-Hagan et al's L. H. White 1, lcn. The California Co.'s University 3, rig. Hiawatha Oil Co.'s University 1, materials. Moody Oil Corp.'s Sawyer 1, set 12½-inch cas 685 ft. Roxana Pet. Corp.'s Boyd 1, elevation 2650 ft, top salt 1155 ft, dr 2210 ft. Simon-Hoffman's R. A. Walters 1, plugged 3110 ft. Texon O. & L. Co.'s University 5, Group 2, top salt 1370 ft, dr 2130 ft; University 6, rig. Texon & Marland Oil Co.'s Sawyer 1, dr 2395 ft.

REEVES COUNTY—Carl Cromwell et al's TP Fee 1, fsh 2920 ft. Deep Rock Oil Co.'s Caldwell 1, lcn. Grisham-Hunter Corp.'s State Fee 1, fsh 825 ft. World Oil Co.'s B. T. Biggs-Holder 1, dr 155 ft.

RUNNELS COUNTY—Red Bank Oil Co.'s Fowler 1, dr 1290 ft. F. P. Zoch et al's Bruce 1, dr 1430 ft. Frank Yates et al's McMillen 1, materials.

SCHLEICHER COUNTY — Beavers-Leath et al's Whitten 1, spd and sd. Cope-Dalton et al's Sol Myer 1, sd 1925 ft. S. C. Magee et al's Robinson 1, materials.

SCURRY COUNTY—Northwest Co.'s T. C. Stinson 1, dr 490 ft; Welborn 1-A, sd 3435 ft.

STERLING COUNTY—The California Co.'s J. T. Davis 2, spudding. Co.-Operative Dev. Co.'s E. W. Douthitt 1-A, dr 3190 ft. The Exploration Co.'s C. A. Broome 1, elevation 2270 ft, flowing sulphur water 2950 ft.

TAYLOR COUNTY—City of Abilene's Fee 1, dr 1210 ft. Sanger O. & R. Co.'s R. H. Anderson 2, dr 1870 ft; Cox 1, dr 1225 ft.

TERRELL COUNTY—Sun Oil Co.'s N. M. Scott 1, dr 1325 ft. E. T. Williams et al's Cowden 1, dr 2660 ft.

TERRY COUNTY—Kingsland Oil & Potash Co.'s Brownfield 1, dr 165 ft.

UPTON COUNTY — Donnelly & Gerke's Rankin 1, plugged 3950 ft. Gulf Prod. Co.'s Baker 1-B, co after shot 2270 ft; Sanger 1, fsh in hfw 3315 ft; J. H. Shirk 1-E, rig. Dunning et al's Crier-McElroy 1, sd 2710 ft. Humble O. & R. Co.'s J. T. McElroy 1, dd, dr gray lime 3580 ft. L. E. Hults et al's Giddings 1, rig. Johnson-McCamey & Atlantic Oil Prod. Co.'s Shirk 1, rig. Johnson-McCamey & Union Land Co.'s Union 1, rig. Marland Oil Co.'s Powell 1, rig; Reese 1, rig; University 1, rig. Sartain Bros. & Davis' Bull 1, sd on top salt 1660 ft. Skelly Oil Co.'s O. P. Jones 1, elevation 2882 ft, top salt 1761 ft, dr 3125 ft. Texon & Marland Oil Co.'s Halff 1, elevation 2784 ft, top salt 1440 ft, dr 1615 ft. Wentz Oil Corp. et al's Shirk 1, elevation 2722 ft, top salt 695 ft, top dolomitic lime 2143 ft, top gray lime 2200 ft, re-set 5 3/16-inch cas with packer to shut off water, oil pay 2272-2331 ft.

VAL VERDE COUNTY—A. Blume et al's Moore 1, sd 2675 ft. O. O. Owens et al's Mills 1, rig. Douglas Oil Co.'s Sellers 1, materials. Hiawatha Oil Co.'s Sellers 1, rig. Independent Operators' Whitehead 1, sd 3710 ft. Plateau Oil Co.'s B. S. Harrison 1, sd 3155 ft. Transcontinental Oil Co.'s Stevenson 1, dr 1540 ft. E. T. Williams et al's W. T. Holman 1, dr 250 ft.

WINKLER COUNTY — Brandon-McCamey

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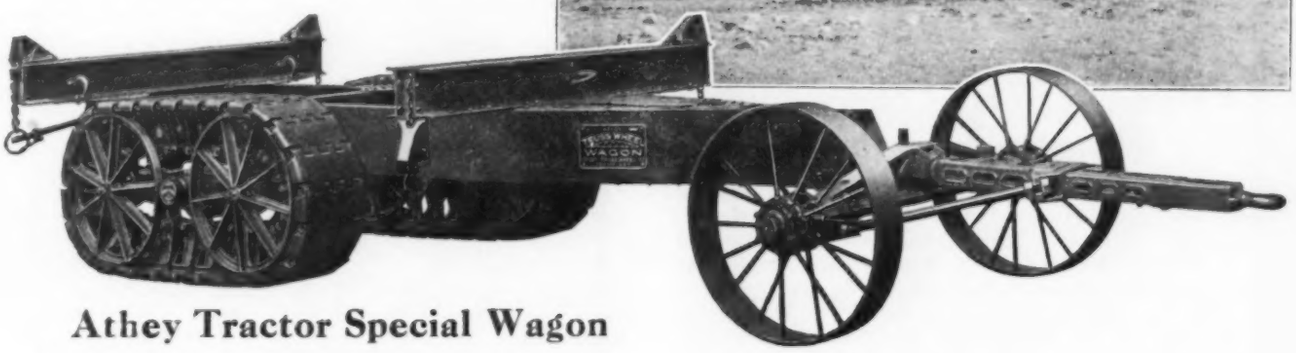

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et al's TP Fee 1, elevation 3367 ft, top salt 1660 ft, sd 3500 ft. McCullough Oil Co.'s Tobe Morton 1, lcn. Ed. S. Hill & Simon-Ladd's Ambrugey 1, dr 700 ft. Champlin Drilling Co.'s Means 1, lcn. R. S. Matthews et al's Cowden 1, dr 500 ft. Llano Oil Co. et al's Scarborough 1, lcn; Taliaferro & Sid Richardson's Sealy 1, elevation 2816 ft, sd repairs 3300 ft. R. A. Westbrook & Co.'s Hendricks 1, gas decreased and no oil in hole, d lime 2800 ft. F. P. Zoch et al's John Sealy 1, set 12½-inch cas 120 ft.

East Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Ellis County—		
Magnolia Pet. Co.'s Getzander 1 ..	†	2940
Kaufman County—		
T. E. Hill & Atlantic Oil Prod. Co.'s Haynie 1	*	3101

DRILLING REPORT

BELL COUNTY—R. R. Penn et al's Hardy-Peck 2, dr 1655 ft.

FALLS COUNTY—Forbes et al's W. D. Kyser 1, dr 2470 ft.

FREESTONE COUNTY—J. S. Cosden et al's J. E. Woods 1, lcn. Orbit Oil Co.'s F. A. Coleman 1, lcn.

HENDERSON COUNTY — Heine et al's Sterrett 1 ,sd 1162 ft.

LIMESTONE COUNTY — Evangeline Oil Co.'s Sweatt-Bass 1, Austin chalk at 2287-2600 ft, dr 2040 ft. C. W. Harrison & Pandem Oil Corp.'s Bassett 1, sd 445 ft. W. K. Clayton et al's Joe Thornton 1, lcn. Humble O. & R. Co.'s Gunter 1, near Thornton 1, Austin chalk at 2521-2775 ft, bailed dry with trace oil 3035-46 ft, std to go to Trinity sand. Killiam & Phillips' O. Montgomery 1, top chalk 2358 ft, dr 2945 ft. Kosse Oil Synd.'s Fenner 1, sd 2905 ft; Jones 1, rig. Pure Oil Co.'s Oliver 1, dr 780 ft. Schaffer et al's D. Oliver 1, spd and sd. E. L. Smith Oil Co. et al's Jake Steubenrauck 1, lcn for 5500 foot contract depth.

McLENNAN COUNTY—D. H. Byrd et al's Bruce Duncan 1, 3 miles SE of Elk, lcn. Castleman Creek Oil Co.'s Schaerhaur 1, sd 1585 ft. Pecan Gap Oil Co.'s Punchard 1, sd 2005 ft.

MILAM COUNTY—Alexander-Lyles et al's Batte 1, dr 3040 ft.

NAVARRO COUNTY—Carrita Oil & Gas Co.'s E. Trammel 1, lcn. J. S. Cosden et al's J. H. Finch 1, dk. J. C. McNeil et al's Pierce 1, tested salt water 3055-60 ft. Sun Oil Co.'s H. A. Swink 3-A, dr 3645 ft. R. R. Penn & Rycade Oil Corp.'s Harrison 1, Bazette district, rig. Lea et al's Kerr 1, top Austin chalk 1230 ft, dr chalk 1445 ft.

San Antonio Wildcats

CALDWELL COUNTY—Bristol Oil & Gas Co.'s Denmon 1 dr. Reiter-Foster Oil Corp.'s Riddle 1, no report. United North & South Oil Co.'s Kelly 1, dr; Tiller 1 dr.

DUVAL COUNTY—Associated Oil Co.'s Sutherland 1, dr; Benavides 1, dr. Barkeley-Meadows-Morgan's King Harper 2, dr. in; King Harp 3, lcn. Buffum et al blk 38 Mesquite ranch, dr.; J. Benavides 1, preparing to dr. Humble Oil Co.'s Dowdy 1, dr; Schallert 7, dr; Walsh 7, ur. Houston Oil Co.'s Mesquite of gas at 1690 ft. O. W. Killam's Lopez 3, sec 6, blk 9, lcn; Lopez 4, 5 and 6, blk 18, sec 319, lcn. Magnolia Pet. Co.'s Spear 1, dr. Maurer & Duggan's Hoffman 1, dr; Simms Oil Co.'s Schallert 1, sec 241, plugging.

GUADALUPE COUNTY — J. H. Davis' Payne 1, Bond & Shaw, dr; Rosenbrook 1, dr below 1425 ft. Wildman & Blackwell's Smith 1, dr.

MEDINA COUNTY—Armstrong Pet. Co.'s Lacey 1, dr. Arnett Oil Co.'s Nixon 1, bailing. California-Medina Co.'s Rothe 1, dr. Golden West Oil Co.'s Courand 1, dr. Ina Oil Co.'s Finger 1, changing rotary rig. Kittle & Townley's Bendle 1, dr. Rand et al's No. 1, dr. Witherspoon Oil Co.'s Adams 1, no report. Western Gas & Fuel Co.'s Adams 1, dry at 1001 ft. Walsh et al's Saathoff 1, dr. Yeager et al's No. 1, dr.

ZAPATA COUNTY—Killam's No. 1, survey 307, dr. Maurer & Duggan's Cuellar 3, section 344, spd in. Malone & Burns' Bissonet 1, moving on tools. A. G. Malone's Harry Fansler 1, on Comits Grant ru. Trees Oil Co.'s Benavides 1, sd. Texas Co.'s Jennings 3, dr below 4000 ft. W. R. Duke's (Evangeline Oil Co.) No. 1 in the Charco Rendendo preparing to spud in.

Coastal Wildcats

COMPLETION

Fort Bend County—		
Gulf Prod. Co.'s Davis 17	*	1120

DRILLING REPORT

AUSTIN COUNTY—Valley Oil Co.'s Reese 1, 30 miles N Orchard, no report.

BRAZORIA COUNTY—Roxana Pet. Corp.'s Pabst 1-A, Clemens dome, dr 1553 ft sandy lime; Clemens Bernard River 1, Clemens dome, lcn; Clemens 3, Clemens dome, dr 2692 ft in shale and lime; Allen 3, Allen dome, dr 2955 ft in sand and boulders; Allen Bernard River 1, Allen dome, dr 102 ft in shale. The Texas Co.'s Mayes 1, Rattlesnake Mound, dr 708 ft in gumbo and lime.

CHAMBERS COUNTY — Osage Oil Co.'s State 1, 5 miles S of Moss Bluff, dr 2785 ft in gumbo. Patillo Higgins' Fee 1, SE of Barbers' Hill, dr 835 ft in gumbo and boulders.

FORT BEND COUNTY—Gulf Prod. Co.'s Davis 15, Long Point, dr 3330 ft in shale; Davis 17, Long Point, abn 1120 ft in cap rock. The Texas Co.'s Farmer 1, Boling, coring sand 4176 ft. Sun Co.'s Farmer 1, Boling, dr 1961 ft in cap rock.

GOLIAD COUNTY — Houston Oil Co.'s Parks 2, near Goliad, no report; Pettus 2, near Goliad, no report.

JACKSON COUNTY—L. E. Norton's Fenner 1, NE Jackson Co., dr 2887 ft, shale and lime.

JEFFERSON COUNTY—Gulf Prod. Co.'s Bordages 2, Fannette, oil sand 5100-5119 ft, fsh for drill stem; Thomas 9, Fannette, dr 3394 ft hard sand. Port Arthur Development Co.'s West 4, Westbury, dr 1715 ft in gumbo. New Beaumont Oil Co.'s Garrick 1, Beaumont, rigging with heavy steam rig to resume dr 2600 ft in gumbo. T. D. Brooks' Young 1, 5 miles S of Spindletop, dr 1604 ft in gumbo.

LIBERTY COUNTY — Humble O. & R. Company's Welder 3, Liberty extension, coring sand 3755 ft; Welder 4, Liberty extension, wt on cement to set, oil sand 3521-30 ft. Gulf Prod. Co.'s Beckman 1, Liberty extension, dr 3570 ft in rock. Sun Co.'s Chambers 1, Moss Bluff, dr 1135 ft in sand.

MATAGORDA COUNTY—Gulf Prod. Co.'s Parkinson 1, Hawkinsville, dr 4280 ft in sandy

WHARTON COUNTY — The Texas Co.'s Felder 2, Boling dome, dr 4104 ft in shale and lime. Rich-Humphrey's Malone 1, 5 miles W of Wharton, sd to repair rig 1841 ft.

CAMERON PARISH, LOUISIANA—Humble-Sun Co.'s Peterson 1, Johnson's Bayou, dr 4230 ft in shale.

Petroleum Safety Council First Aid Contest Planned During Institute Meeting

Tulsa, Okla.—If the weather will permit, the second annual first aid meet of the Petroleum Safety Council will be held on the roof of the Mayo hotel during the session of the American Petroleum Institute. The first aid meet is part of the educational program in connection with the institute meeting.

The following companies have entered teams: Skelly Oil Company, Pierce Petroleum Corporation, Tidal Oil Company, Roxana Petroleum Corporation, Phillips Petroleum Company, Empire Gas & Fuel Company, Barnsdall Oil Company, Gypsy Oil Company, Twin State Oil Company, Continental Oil Company, Marland Refining Company and Carter Oil Company.

At least 20 teams of six men each are expected for the contest. The Bureau of Mines is co-operating by training the teams and will spend a large part of the time between now and the second week of December in preparing teams for the contest.

Rules governing the contest follow:

1.—A team will be composed of six men. Any employe of the petroleum industry may be a member of a contesting team, provided he is not a physician or a trained nurse.

2.—At the conclusion of each event the captain must line up his team at the head of the patient, have them count off and then raise his right hand and announce his team number.

3.—Teams must bring their own first aid material, including bandages, splints, blankets, etc., and shall not be allowed to leave patient in order to obtain materials to complete problem.

4.—Splints shall not be padded prior to the beginning of any event requiring their use, but teams should have on hand padding for the splints required in any problem.

5.—No practicing shall be allowed on the field before the beginning of the contest.

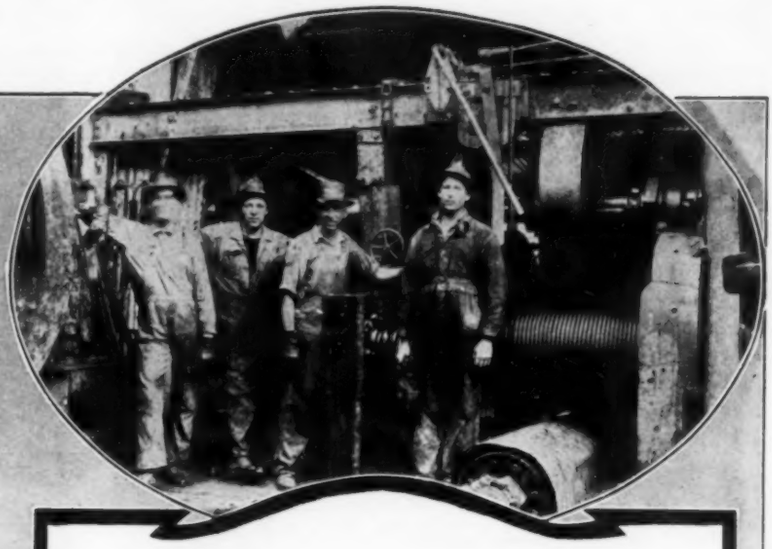
6.—First aid material as outlined in bureau of mines handbook "Manual of First Aid Instructions," only shall be used, and is hereby authorized for sole reference and guidance in contest work.

7.—Teams performing will wear overalls and jumper or similar form of dress. Patient will be dressed similarly to other team members.

8.—All bandages will be applied over clothing, except in case of injury to the foot, the shoe must be removed during the problem. Preparation of bandages prior to beginning will not be permitted, with the exception of cravat bandages which may be folded.

Study of Davenport Field

Washington, D. C.—Petroleum engineers of the Bureau of Mines, Department of Commerce, have completed a field study of underground conditions in the Davenport oil field in Oklahoma. This work is part of the Bureau's continuous investigations of oil fields of the United States, with a view to increasing the recovery of oil. Detailed technical information was obtained relating to underground conditions in this field, with regard to nature, extent, and location of the various oil and gas strata, and the presence of encroaching waters.



P. L. Best (third from left) and his crew drilling Olinda No. 1, Richfield, Calif. down 4400 ft.

Driller Best—Says:

—"Williamsport has proven very satisfactory and lasted over a thousand feet longer than the last drill line used."

—Williamsport is glad to compliment Mr. Best upon the way he handles his lines. Good lines in the hands of a good driller are the cheapest combination in oil well drilling.

We are glad to see our lines in the hands of such able men.

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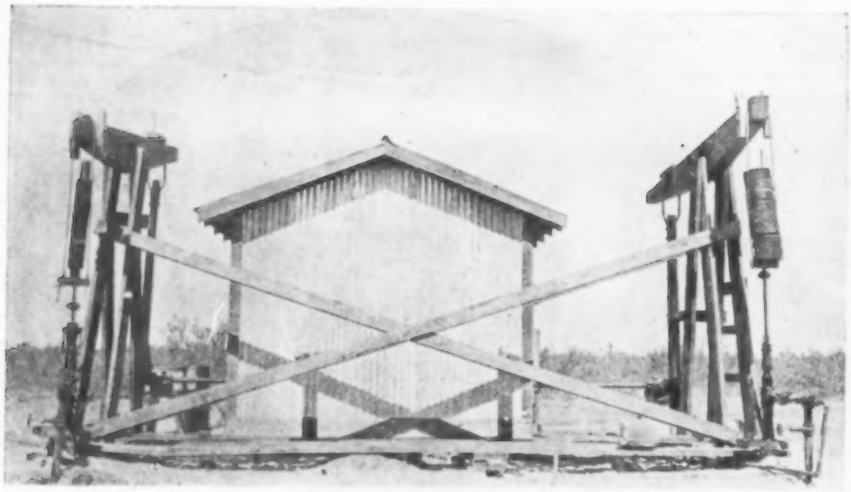


Pumping unit used by Gulf in producing water and pumping same two and one-half miles with a six h. p. engine.

Six Horse Power Gasoline Engine Pumps Boiler Water Over Two Miles

ECONOMY and service are both realized from this water pumping unit used by the Gulf Production Company in supplying its drilling rigs on the McElroy ranch near the Crane-Upton County line in West Texas. Good boiler water is scarce in West Texas, owing to the presence of gyp in most of the underground waters, and Gulf was forced to go about two and one-half miles from its oil producing lease to obtain suitable water.

The water wells were drilled with machines, and tubed with three-inch pipe at a total depth of 35 feet. Two wells, located 20 feeet apart, are furnishing sufficient water for current field operations, and both are pumped by the same engine, which also furnishes the necessary power in pumping the production through the two and one-half miles of two-inch water line to the drilling rigs.

According to H. A. Melat, general production superintendent for Gulf in North and West Texas, a six horsepower Fairbanks-Morse gasoline engine is hooked up to a two-inch counter-shaft 20 feet in length. The ends of the counter-shaft are supported by bearings, which rest on concrete foundations, and a crank attached to each end of the shaft conveys the pumping stroke to the pitman. The pumping equipment proper is identical to that used in pumping shallow oil wells on the beam, as illustrated in the accompanying photograph. The lifting load on the engine is partially relieved by alternating the strokes of the pumps.

Sufficient reserve power is available at this pumping unit to permit the operation of six wells by the single engine, and when the water requirements on the McElroy ranch property surpass the output of the present two shallow water wells, more wells will be drilled at short intervals away and in a line with the original ones. The counter-shaft will be extended through the cranks on the inside wells to serve the new wells added to the pumping unit.

Gas Pipe Lines Should Be Buried Underground

Pipe lines through which natural gas is flowing should be buried in order to minimize fluctuations in the temperature of the gas, as these fluctuations have several harmful effects, states the Bureau of Mines, Department of Commerce, which has made a study of the subject, in co-operation with the State of Oklahoma.

One very important effect of fluctuation in temperature has been observed, when the leakage of gas from transmission lines constructed on top of the ground was compared with that from lines covered with earth. The rapid temperature fluctuations, when the lines are exposed to the rays of the sun, cause expansion and contraction in the joints and increase the leakage of gas. This effect has been more noticeable in lines with screwed and rubber-coupled joints than in welded lines. A striking example of this was found in a leakage survey recently completed by the Bureau of Mines. A transmission system in a hilly district was tested for leakage. In the roughest part of the district where the lines were uncovered on account of the high initial cost of ditching, the annual leakage averaged about 2,000,000 cubic feet per mile of three-inch line at 100 pounds per square inch gauge pressure. On the same transmission system, where the topography was more favorable for ditching, and the lines were buried, the annual leakage varied from only 100,000 to 200,000 cubic feet.

Another effect of temperature fluctuation is to decrease the accuracy of measurements of gas volume. In order to meter properly the quantity of gas flowing past any point in a transmission system, it is necessary to know the temperature of the gas. If the temperature remains fairly constant, the gas flow can be measured with a close degree of accuracy, but if it fluctuates rapidly, close measurement is impossible.

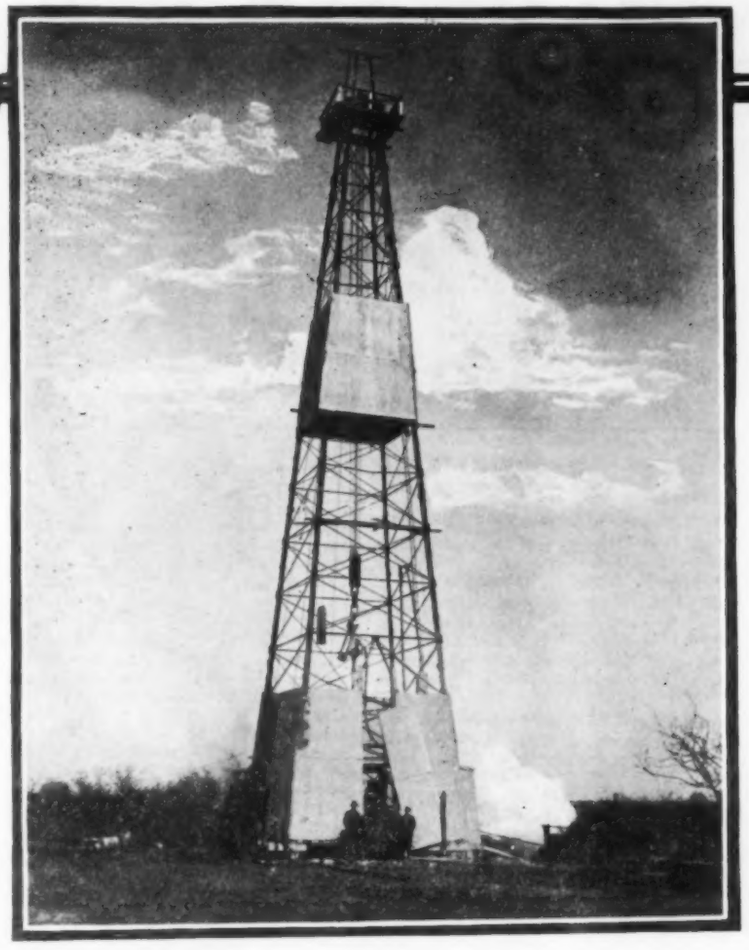
The accuracy of volumetric measurement is greatest when the temperature of the gas is nearest to the standard temperature of 60 degrees F. This is due to the necessity of applying a correction to the apparent volume of gas as measured at other temperatures, in order to determine the true volume at 60 degrees. There is usually more or less error introduced in making such corrections, and this error is greater the larger the correction.

In order to estimate the magnitude of these temperature fluctuations, records were kept by the Bureau of Mines for a period of one year of the temperatures of natural gas flowing in buried and uncovered pipe lines. It is hoped that these records will serve as a basis for explaining differences in leakage rates from buried and uncovered transmission lines, "breathing losses" in gasoline pipe lines, and apparent errors in natural-gas measurements.

Details of this investigation are contained in Serial 2771, "Fluctuations in the Temperature of Natural Gas Flowing in Buried and in Uncovered Pipe Lines," by E. L. Rawlins, associate natural gas engineer, copies of which may be obtained from the Bureau of Mines, Department of Commerce, Washington, D. C.

Kevin - Sunburst Lime Shows Possibilities

Great Falls, Mont.—A recent study of the log of the California Petroleum Company's great gusher completed in the Kevin-Sunburst field indicates that the possibilities of the Madison lime are almost unlimited. The Ellis sand, which has furnished many of the spectacular gushers in the field, did not yield anything of importance. The test was continued to the lime with startling results. It was first reported that the lime was penetrated more than 150 feet, but it has been found that the lime formation was tapped only 43 feet. Formerly it was regarded that the Ellis sand was practically the last chance. The deeper lime possibilities seem almost as great as in some parts parts of the field as the Ellis sand. Wells which have been small or complete failures now stand a chance of finding production in the lime formations. It is not unusual to find water between the Ellis sand and the lime deposits. The faulted areas have been the means of showing the possibilities of the deeper horizons.



MOORE TUBULAR STEEL DERRICKS

Double Strength With Reinforcing Legs

Moore 96 foot Rotary Derrick with reinforcing legs. Lately used for test drilling in Archer County, Texas, completing the deepest test ever drilled with rotary in that territory. Stood the worst punishment without the slightest trouble. Another Moore derrick, now in use at Big Run, Pa., has drilled to a depth of 7060 feet, and is still going strong.

DEEP TESTS

In deep test drilling, the unexpected is always apt to happen. You will be prepared for every emergency if you use a Moore tubular derrick with pipe reinforcing legs. Such a derrick has nearly double the capacity of a single leg derrick, yet its first cost is very moderate.

After the well is completed, the whole derrick, or the reinforcing legs alone can be moved and used again and again on other locations for drilling or pulling casing.

For instance, the derrick illustrated above is shown in its third location, in Archer County, Texas. At one time, it supported the weight of 54 thribbles of 4-inch drill stem hanging in the derrick. On another occasion, the pipe was frozen and the derrick several times parted the 4-inch 12½ lb. drill stem. Such instances are typical of the giant strength of Moore Derricks with reinforcing legs.

LEE C. MOORE & CO., Inc.
Pittsburgh, Penna.

Tulsa, Okla.
Shreveport, La.
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PERMITS GRANTED FOR NEW WELLS

Weekly Comparison of New Wells

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas and California:

	Mar. 1926	Apr. 1926	May 1926	June 1926	July 1926	Aug. 1926	Sept. 3	Sept. 10	Sept. 17	Sept. 24	Oct. 1
Arkansas	106	124	103	100	107	65	21	11	24	6	15
California	116	135	79	69	80	103	32	42	25	7	30
Louisiana	145	150	109	107	141	93	24	30	34	25	13
Kansas	160	170	156	161	143	119	32	25	14	53	31
Oklahoma	419	593	471	411	522	396	90	110	116	82	63
Texas	817	1070	941	1168	1468	1073	250	242	207	322	276
Mountain States	...	...	113	124	108	106	16	21	34	30	24
Total	1763	2242	1972	2149	2569	1955	465	481	434	525	452

MOUNTAIN STATES

COLORADO

Northwestern Colorado Oil Co.'s No. 1, SW¼ 36-8n-55.

NEW MEXICO

R. M. Smith's No. 1, 14-29-11. Twenty-eight Oil Co.'s No. 1, NE¼ 21-29-11. Hogan Oil Co.'s No. 1, 9-30-11. Wooley & Jone's No. 1, SW¼ 21-17-30. Empire Gas & Oil Co.'s No. 2, 2-18-27.

MONTANA

Craig & McCutcheon's No. 1, 29-36-2e. Rice Oil Co.'s No. 16, NE¼ 13-34-2w; No. 17, SW¼ 30-35-1w. Adams Oil Co.'s No. 1, SE¼ 31-35-1w; No. 1, NW¼ 5-34-1w. Trapp Oil Co.'s No. 2, SW¼ 13-35-2w. Big West Oil Co.'s No. 4, NW¼ 2-34-2w. Tecumseh Oil Co.'s No. 3, SW¼ 32-35-1w. Hill Oil Co.'s No. 10, SW¼ 22-35-2w. Carter Oil Co.'s No. 1, SE¼ 6-33-1w. Wolf Development Co.'s No. 3, NE¼ 27-35-2w. Butte-Kevin Oil Co.'s No. 2, SW¼ 32-35-2w. Ferdig Oil Co.'s No. 12, NE¼ 1-34-2w; No. 20, NE¼ 34-35-2w. Wells Oil Co.'s No. 1, SW¼ 20-34-1w. Pan-American Oil Co.'s No. 2, SW¼ 35-35-2w. Kalispell-Kolman Oil Co.'s No. 1, SE¼ 22-35-1w. Medford Oil Co.'s No. 3, NE¼ 24-34-2w.

CALIFORNIA

Belridge—Carneros Oil Co.'s No. 16, 31-28-21.

Brea Olinda—General Pet. Corp.'s Tonner 4-A, 1-3-10.

Cat Canyon—R. & G. Oil Co.'s No. 6, 30-9-32.

Coalinga—Standard Oil Co.'s No. 201, 35-3-10.

Humboldt Co.—North Counties Oil Co.'s 2, 36-2-1.

Huntington Beach—Miley Oil Co.'s Pacific Electric 6, 10-6-11; Pacific Electric 5, 10-6-11. Geo. F. Getty, Inc.'s H. B. 7, 10-6-11. Julian Pet. Corp.'s Bristol 1, 10-6-11. Petroleum Securities Co.'s Doyle 1, 10-6-11. Placentia Richfield Central Oil Co.'s Dabney 1, 10-6-11. Globe Lease & Royalty Co.'s No. 1, 27-5-11.

Kern County—Barnsdall Oil Co.'s No. 1, 1-28-28.

Long Beach—A. J. Delaney's No. 36, 13-4-13. National Gas Synd.'s No. 2, 13-4-13.

Midway—Standard Oil Co.'s No. 113, 33-31-24. Standard Oil Co.'s No. 8, 5-32-24.

Moody—R. H. Shannon's New Moody 4, 8-9-1.

Piru—Wrenn et al's No. 8, 17-4-18.

Richfield—S. H. Keoughan, Trustee's Kraemer-Keoughan 3, 30-3-9. General Pet. Corp.'s Hugo 5, 33-3-9; Stern 7, 28-3-9. Union Oil Co.'s Thompson & Goodwin 7, 28-3-9.

Santa Fe Springs—Associated Oil Co.'s Dewenter 5, 6-3-11.

Sunset—Empire Gas & Fuel Co.'s No. 2, 4-11-23. The United Oil Co.'s Triangle 1, 32-12-23.

Torrance—C. C. M. Oil Co.'s Del Amo 56, 9-4-14.

Ventura—Associated Oil Co.'s Lloyd 41, 27-3-23; Lloyd 43, 27-3-23.

Wheeler Ridge—Standard Oil Co.'s Kern Co. Lease No. 2, 27, 27-11-20.

LOUISIANA

Caddo Parish—Bethany Oil & Gas Co., P. O. Box 1106, Shreveport, E. K. Smith 1, 1-20n-16w, 400 ft S and 500 ft E of NW corner of SE¼ of SW¼. Dixie Oil Co., Inc., Slattery Bldg., Shreveport, Dillon 81, 13-21n-15w, 335 ft E and 1290 ft S of NW corner of section. The Texas Co., Ricou-Brewster Bldg., Shreveport, Harrell 55, 4-21n-16w, 670 ft S and 610 ft W of NE corner of NW¼; Lenoir Fee 7, 26-22n-15w, 1956 ft W and 160 ft S of NE corner of section.

Franklin Parish—Arkansas Fuel Oil Co., Ardis Bldg., Shreveport, Mrs. H. H. Buie et al 1, 9-12n-6e, 300 ft S and 300 ft W of NE corner of SE¼ of NE¼. R. W. Williams, 401 City Bank Bldg., Shreveport, Eckhard Lennon 1, 17-14n-8e, 300 ft S and 300 ft W of NE corner of section.

Iberia Parish—The Union Sulphur Co., Sulphur, Fee 1, 26-11s-8e, 200 ft S and 200 ft W of NE corner of Lot 7 in irregular section 26.

La Salle Parish—Marcus & Rowe, 213 Ouachita Bank Bldg., Monroe, Hatfield 1, 7-10n-?e, 150 ft N and 840 ft E of SW corner of NW¼ of NE¼.

Natchitoches Parish—Lawson & Pharis, P. O. Box 1027, Shreveport, Clark & Morse Lbr. Co. 1, 23-5n-6w, 600 ft N and 600 ft E of SW corner of NE¼. The Texas Co., Shreveport, Emma Moss 1, 31-7n-8w, 1070 ft W and 200 ft S of center of section.

Union Parish—O. M. Grisham, Agt., Monroe, J. A. Peek 1, 5-20n-4e, 3960 ft S and 1320 ft W of NE corner of section; Fannie Williams 1, 6-20n-4e, 2640 ft W and 660 ft S of NE corner of section.

Winn Parish—Keen & Woolf Oil Co. and H. E. Oliver, Commercial Bank Bldg., Shreveport, Tisdale 3, 26-10n-1e, 150 ft S and 150 ft E of NW corner of E½ of NW¼ of NW¼.

ARKANSAS

Ouachita County — Magnolia Pet. Co.'s *J. Goodwin 10, 5-16-15, NEc lot 2 in NW¼. Phillips Pet. Co.'s *Joyce 16, 33-15-15, 165 ft S and 100 ft W of NEc SE¼NE¼. J. D. Reynold's Cramer 3, 22-15-16, SEc SW¼SW¼. Standard Oil Co.'s J. E. Murphy B-12, 28-15-15, 200 ft N and W of SEc SW¼NW¼. The Texas Co.'s *Neeley 7, 27-15-16, 1120 ft N and W of SEc NE¼.

Union County—S. Cook's Tatum 9, 7-16-15, cen of E line NW¼ NE¼. Constant Ref. Co.'s Robinson 4, 6-18-15, NWc S½ SW¼ NE¼. Humble O. & R. Co.'s Goodwin 3, 20-17-16, NWcSE¼NE¼. H. L. Hunt's Dykes 1, 21-18-12, NEc SE¼SW¼. Imperial O. & G. Co.'s Stocks 1, 21-17-16, center of NE¼NE¼SW¼; Stocks 2, 21-17-16, center SE¼ NE¼SW¼. Rovenger Oil Codp.'s Dumas 9, 9-17-16, NWc SW¼SW¼. Superior Oil Co.'s Cordell 1, 5-18-13, SWcNW¼NW¼. The Texas Co.'s *C. L. Saxon 4, 4-16-16, 200 ft N and E of SWc SE¼NW¼.

*Old wells to be deepened.

OKLAHOMA

Caddo County—Briscoe and Hall No. 2 Lacky, northeast corner of the southwest of the northwest of 11-5n-9w.

Carter County—Magnolia Petroleum Co., No. 6 J. J. Hardin, northwest corner of the northeast of the northeast of 19-1s-3w; No. 2 W. Hardin, northwest corner of the northeast of the southwest of 19-1s-3w; No. 4 W. Wilson, southwest corner of the southeast of the southeast of 16-2s-2w. Smith & Shell No. 1 Gossett, northwest corner of the southwest of 3-3s-3w.

Creek County—Magnolia Petroleum Co., No. 28 Vance, old well deepened, center of the south line of the southeast of the northeast of 7-18-7. Devonian Oil Co., No. 1 Bigpond, southwest corner of the northeast of 36-15-7. C. G. Tibbens No. 1 L. Washington, northeast corner of 27-15-8. Crandall & Murta No. 1 McKine, southwest corner of the northeast of 11-18-11. Sheridan Oil Company No. 1 Unallotted, northwest corner of 27-18-11. Regal Oil Company No. 4 Bigpond, northwest corner of 18-18-12. Eliza Tim Oil Company No. 1 Inman, southwest corner of 9-17-11. Bassett et al No. 1 Ricks, southeast corner of the northeast of the southeast of 35-14-10.

Garfield County—Sinclair Oil & Gas Co., No. 38 Kisner (West), southwest corner of the northeast of the northwest of 19-22-3w.

Garvin County—The Texas Co., No. 3-B Deryden, southeast corner of the northeast of the southeast of 17-1n-3w.

Grady County—Nicholas Oil & Development Company No. 1 Ridley, old well deepened, center of the northeast of the southeast of 26-4n-8w.

Grant County—Amerada Petroleum Corp., No. 1 White, northwest corner of the southwest of 22-29-3w.

Kay County—Blackwell Oil & Gas Company No. 3 Lane, northwest of the northeast of the northeast of 22-28-3w. Polling et al No. 2 Savage, southwest corner of the southeast of the northeast of 5-27-1w. Ballentine et al No. 1 Buessing, old well deepened, northeast corner of the northwest of 28-27-1e Marland Oil Company No. 4-A North, twin, southeast corner of the northwest of the northeast of 12-26-2w; No. 5-A North, twin, northwest corner of the northeast of the northeast of 12-26-2w; No. 9 North, southwest corner of the northeast of the northeast of 12-26-2w.

Muskogee County—H. H. Francis et al No. 3 M. McIntosh, northeast corner of the southwest of 17-15-17. Jolly Ogg Oil Company No. 1 T. Lewis, northeast corner of the southeast of the northwest of 17-15-17. H. E. Williams No. 5, northeast corner of the southwest of the northwest of 17-15-17.

Okfuskee County—Pure Oil Co., No. 1 Fixico, northwest corner of the southeast of 14-11-10.

Okmulgee County—Denver Producers & Refiners No. 9 Thomas, center of the north line of the southwest of the northeast of 32-13-11. Invader Oil Company No. 5 Raine, northeast corner of the southeast of the northwest of 20-15-14. Cumberland Petroleum Company No. 5 T. Dunn, center of the north line of the northeast of the northwest of 21-13-14. Iron Mountain Oil Company No. 12 Thornsberry,

REID

THE MAKERS of Reid Powers have repeatedly called attention in their national advertising to the fact that the design renders all vital parts absolutely dust proof, making for great efficiency and long life.

A power house down in Texas burned in December of last year, leaving the 20′ Reid Band Wheel Power buried in ashes, and dirt used to smother the burning oil. When taken apart, the eccentric bearing surfaces and shaft bearings were found absolutely free of dirt, ashes and grit. In twelve hours the Power was again ready for operation.

The strain comes very low on a Reid Power, and the design is extremely heavy. There seems to be almost no limit to the load it will handle, or the number of years it will serve faithfully.

Our Engineering Department will gladly make a complete survey of your wells, and submit estimates and recommendations covering the type and size of Reid Power best fitted for the job. Get in touch with the Frick-Reid Store in your field, or write our Tulsa office about the world's best—

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FRICK-REID SUPPLY CO.

Tulsa, Okla. **Pittsburgh, Pa.**

In Oil Field Equipment-the most HUMAN organization in America

Baker Cement Devices Insure Successful Cementing Operations

Baker cementing devices are designed for special service in cementing operations. They are improvements over old methods, built to give exact, positive performance and safety. They are essential to efficiency and economy in modern cementing practice.

The Baker Cement Dump Bailer

—a "fool-proof" cementing device positive in its action. It never fails to dump. When suspended, its weight is exerted against the closed valve and locks it. On reaching the bottom, the sleeve is forced upward on the body, tripping the valve and releasing the cement. A sure job—well done.

The Baker "Sure Shot" Cement Plug

This popular plug makes practical the dump bailer method of cementing. It guarantees a successful job without rigging up the pumps or employing expert cementers. Let it simplify your cementing operations for there's no going wrong with Baker's "Sure Shot" Plug.

Write for folders describing Baker Cementing Devices

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Export Representative: Buck & Stoddard, 25 Broadway, New York City

Tret-O-litE

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PROCESS PATENTED. The Barnickel processes for treatment of cut oil and other petroleum emulsions by the use of chemical agents are protected by valid process patents issued by the United States and foreign countries.

The purchaser of TRET-O-LITE is licensed to practice the Barnickel processes to the extent permitted by the quantity of TRET-O-LITE purchased. He is not licensed to use any other chemical covered by the Barnickel patents, either alone or with TRET-O-LITE.

WM. S. BARNICKEL & CO.

ST. LOUIS, MO.

northeast corner of the southwest of the northwest of 24-13-14.

Osage County—Tidal Osage Company No. 19, northwest corner of the northeast of 27-28-7. Phillips Petroleum Company No. 3, southwest of the southeast of the southeast of 20-26-6; Phillips No. 4, southeast corner of 20-26-6. New England Oil & Pipe Line Company No. 1, southwest corner of the northwest of 16-25-6. Indian Territory Illuminating Oil Company No. 348, southeast corner of the northwest of the northwest of the northwest of 8-25-11. Winona Oil Company No. 6, northeast of the southwest of the southwest of 27-24-10. Mid-Kansas Oil & Gas Company No. 3, southwest corner of the northeast of the southeast of 10-21-1. Kewanee Oil & Gas Company No. 3, southeast corner of the southwest of the northwest of 17-21-12. Sand Springs Home No. 1, northwest corner of 25-20-10; No. 7, southeast of the northwest of the northeast of 5-20-11. Pioneer Petroleum Company No. 7, northwest corner of the southwest of the southwest of the southeast of 5-20-11.

Pawnee County—Magnolia Petroleum Company No. 3 B. Fugate, southwest corner of the northwest of the southeast of 9-20-6.

No. 3 Vogler, old well deepened, northwest corner of the southeast of the northeast of 7-18-7.

Payne County—Shaffer Oil & Refining Company No. 5 Sharrum, southwest corner of the northwest of 5-17-4.

Home Gas Company No. 3 Kirk, southeast corner of the northeast of the northwest of 6-17-4.

Pontotoc County—Ada Development Company No. 1 Sneed, northeast corner of the southeast of the northeast corner of the southeast of the northeast of 4-3n-6e.

Pottawatomie County—Indian Territory Illuminating Oil Company No. 1, school land, southeast corner of the southwest of 16-8-5.

Seminole County—Carter Oil Company No. 5 Grisso, northeast corner of the southeast of the southwest of 23-9-6

Sinclair & Transcontinental No. 2 P. Fixico, southeast corner of the southwest of the northwest of 23-9-6.

No. 2 P. Fixico, northeast corner of the southwest of the northwest of 23-9-6.

Tidal Oil Company No. 7 Harjo, southwest corner of the northwest of the southeast of 23-9-6.

Tidal No. 8 Harjo, northwest corner of the southwest of the southeast of 23-9-6.

Mid Continent Petroleum Company No. 5 Tayoche twin, northeast corner of the southeast of the southwest of 24-9-6.

Indian Territory Illuminating Oil Company No. 1 Roscoe, northeast corner of the southwest of 15-8-6.

Sequoyah County—Sequoyah Gas Company No. 1 Ralph, center of the southwest of the northeast of 32-11-25.

Citizens Gas Company No. 1 Shamblin, northwest corner of the southeast of the northwest of 15-11-26.

Stephens County—Harper et al No. 1 Enlee, northeast corner of the southeast of the southeast of 21-2s-7w.

Tulsa County—Gledden et al No. 1 Fife, southwest corner of the northwest of the southeast of 15-19-11.

Tidal Oil Company No. 1 S. Brown, northwest corner of the southeast of 12-16-13.

Wagoner County—Thrift et al No. 3 A. Drew, southwest of the northwest of the northwest of 30-18-15.

Mitchell Oil Company No. 1 Barnett, northeast corner of the northwest of the northeast of 36-17-16.

J. F. Blackwood No. 5 J. Perryman, twin, northwest corner of the southeast of the southwest of 20-17-17.

KANSAS

Butler County—Rodgers et al No. 1 Nichols, northeast corner of Lot 17, section 31-26-8.

Empire Gas & Fuel Company No. 3 Love, southeast corner of the southwest of the southwest of 20-28-4e.

Chase County—Sinclair et al No. 1 Lewis, southeast corner of 25-21-9.

Cowley County—Brinn et al No 1 Goodrich, southeast corner of the northeast of the northeast of 33-31-4.

Elk County—Cosden et al No. 1 Dawson, southeast corner of the northwest of 22-31-10.

Greenwood County—Sinclair Oil & Gas Com-

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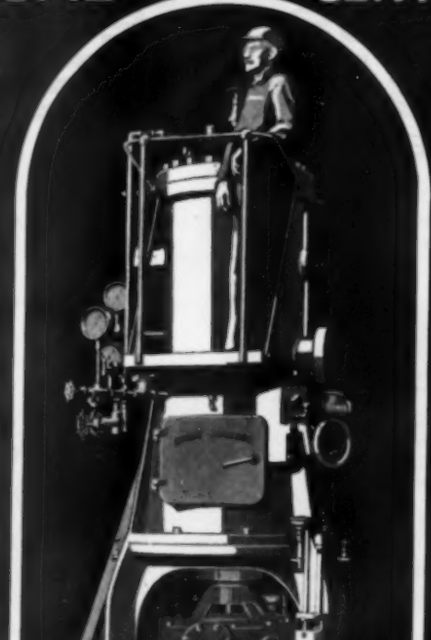

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Forced circulation in cracking stills increases the capacity of the still.

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California
E. C. SAUL.
Monadnock Building, San Francisco, California

pany No. 50 Browning, center of the northeast of the southeast of 19-22-10.

Empire Gas & Fuel Company No. 8, Bartlett, southeast corner of 15-22-11.

Snyder et al No. 1 Barnard, southwest corner of the southeast of the southeast of 30-22-12.

Pryor & Lockhart No. 1 Clark, southwest corner of the southeast of the southwest of 3-22-12.

Skelly Oil Company No. 1 Todd, northeast corner of the southeast of 9-22-13.

Fisher, Lauck et al No. 1 Seeley, northeast corner of the northwest of 6-23-11.

Texas Company No. 3 Fogle, northwest corner of the southwest of the northwest of 16-23-11.

Texas No. 4 Fogle, southwest corner of the northwest of 16-23-11.

Texas & Simmons No. 2 "B" Edwards, northwest corner of the southwest of 16-23-11.

Texas No. 2 McGilvrey, southeast corner of the northeast of 17-23-11.

Simmons and Amerada Petroleum Corporation No. 4 Ellis, northeast corner of the northwest of the southwest of 26-23-11.

Empire Gas & Fuel Company No. 1, Schindler, northeast corner of the northwest of 27-23-11.

Syndicate Oil Company et al No. 1 Mosby, southwets corner of the southeast of the northeast of 3-24-8.

Phillips Petroleum company No. 5, Nixon, southwest corner of the southeast of the southeast of 25-24-10.

McGinnis et al No. 2 Mook, southeast corner of the northeast of the northeast of 36-24-10.

McGinnis et al No. 4 Mook, southwest corner of the northeast of the northeast of 36-24-10.

Manhattan & McGinnis No. 1 Mook, northeast corner of the northwest of the northeast of 36-24-10.

Polhamus & Smith No. 2, Smith, southwest corner of 8-24-11.

York State Oil Company No. 1 Klein, southeast corner of 15-25-10.

Abel, Finney et al No. 1 Hammond, northwest corner of the southeast of 17-25-10.

McCulloch Oil Company No. 1 Jameson, southeast corner of 30-26-13.

Valley-Osage Oil Company No. 1 Ludlum, southeast corner of the southwest of the northeast of 33-26-13.

Marion County—Wilcox Oil & Gas Company No. 1, Sklenar, southeast corner of the northwest of 8-19-4.

Frank et al No. 1 Batt, northwest corner of 9-19-4.

Sumner County—Gypsy Oil Company No. 1, Griffith, northeast corner of the southwest of the northeast of 3-31-2e.

TEXAS

Archer County — Texhoma Oil & Ref. Co., Wichita Falls, K. Kempner 9, SP Ry sur, A115, 150 ft to N and W lines; Kemp & Kempner 2, B 63, same sur, 300 ft W of No. 1; 4, same sur, 300 ft N of No. 3; W. H. Chilson 1A, B 3, CCSL sur, 150 ft to S and W lines. The Texas Co., Wichita Falls, Turbeville 13, R. Carson sur, B 172, 150 ft to E and S lines; 11, same sur, 314 ft W of No. 9; 12, same sur, 342 ft W of No. 11. Gulf Prod. Co., Fort Worth, K. Kempner 4, KWVF Ld. sur, B 63, 300 ft W of No. 1. Ray & Massie, Wichita Falls, S. G. Helm 1, J. Taylor sur, 150 ft to S and E lines. Gulf Prod. Co., Fort Worth, K. Kempner 2, KWVFL sur, B 63, 300 ft N of No. 1. Barnsdell Oil Co., Tulsa, Okla., L. F. Wilson 1, Lot 3, B 126, ATNC sur, 150 ft to N and E lines. Schermerhorn Oil Co., 408 Cosden Bldg., Tulsa, Okla., H. O. Prideaux 2, J. Dorsey sur, B 26, 300 ft W of No. 1. W. J. Grasham et al's Wichita Falls, S. Cowan 1, B 55, JCSL sur, 150 ft to N and E lines. Pet. Prod. Co., Wichita Falls, Turbeville 3, R. Carson sur, B 171, 337 ft E of No. 1. T. F. Hunter et al, Wichita Falls, T. B. Wilson 1, S 12, H&TC sur, 750 ft to E and 150 ft to N lines. Jeffers & Jeffers, Wichita Falls, W. L. Andrews B2, G. C. Frarley sur, B 2, 150 ft to E and 516 ft to S line. McCarty Oil Co., Wichita Falls, F. Wilson 21, H&TC sur No. 2, 180 ft to S and 150 ft to W line. Tidal Oil Co., Fort Worth, W. P. Ferguson 4, S 2, SP Ry sur, 150 ft to W and 510 ft to S line. Marland Oil Co., Fort Worth, J. J. Perkins 1, S 27, DSL sur, 150 ft to S and W lines.

Murchison & Fain Oil Co., Wichita Falls, W. J. Logan B 5, Allison-Arms sur, 100 ft E of No. 4. Humphrey, Kruger, Blair, Kell, Wichita Falls, R. O. Prideaux 5, J. J. Hand sur, 300 ft W of No. 4. Magnolia Pet. Co., Dallas, A. J. Lowe 25, B 2, I. Holman sur, 300 ft E of No. 17.

Atascosa County—Schimmel Pet. Corp., Ft. Worth, Dillon-Glasscock 5, B 334,, G. W. M. Duck sur, 200 ft to E and 440 ft to N line; E. Martinez 3, G. W. M. Duck sur, B 334, 507 ft S of No. 1. W. G. French, First Bank Bldg., San Antonio, F. Jaksik 1, M. Escalero sur, 650 ft to W and 350 ft to S line.

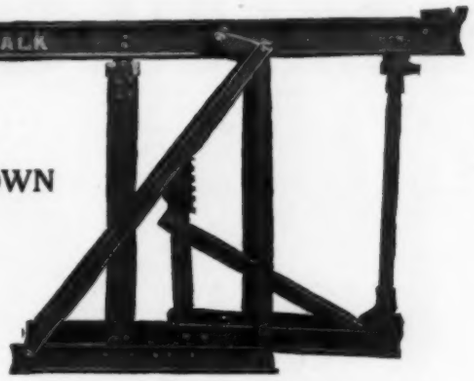
Brown County — Humble Oil & Ref. Co., Cisco, D. C. Wooldridge 5, No. 157 TE Ry sur, 302 ft W of No. 4; M. E. Fry 5, J. Chandoin sur, 300 ft N of No. 4; J. H. Fry 1, G. Stubblefield sur, 150 ft to W and S lines; J. I. Foster 5, T. Benson sur, 300 ft N of No. 4. E. M. Curry, Cross Cut, D. C. Wooldridge 7, ET Ry sur, 300 ft S of No. 5; 6, same sur, 300 ft N of No. 4; 8, same sur, 150 ft to N and E lines. Barkley & Conway, Ranger, W. W. Allen 6, S 8, B 789, J. Delgado sur, 200 ft to N and 150 ft to W line. The Texas Co., Fort Worth, R. Hickman 3, T. Benson sur, S 783, 150 ft to S and 751 ft to W line; 4, same sur, 1119 ft to E and 750 ft to S line. Kone Prod. Co., Cisco, J. I. Foster 8, T. Benson sur, 300 ft N of No. 7. Bowers-Evans & Vaughn, Brownwood, C. Eads 1, J. Day sur, S 635, 235 ft to E and S lines. States Oil Corp., Eastland, D. C. Wooldridge, 15 S 157 ET RR sur, 313 ft W of No. 11; 14, 300 ft Nof No. 12. Charter Oil Co., Box 35, Brownwood, L. L. Childress 10, J. Almendaris sur, 320 ft N of No. 8. Amerada Pet. Corp., Box 1004, Cisco, J. H. Fry 3, G. Stubblefield sur, 150 ft to W and 1050 ft to N line. Phillips Pet. Co., Bartlesville, Okla., J. H. Prater 4, S 145, W. L. Swain sur, 398 ft W of No. 3. E. L. Smith, Mexia, J. W. Newton 2, Honeycut sur, 600 ft S of No. 1. E. T. Burton, Trustee, Laredo, Petsick 1, W. A. Smith No. 142 sur, 150 ft to SE and SW lines. Gilman & Conway Bros., Cross Plains, N. W. Newton 11, S 149, Wm. Miller sur, 350 ft N of No. 9. Advance Co., F. & M. Bank Bldg., Ft. Worth, S. Whitted 1, C. L. Crump sur, 150 ft to N and 927 ft to W line.

Bexar County—B. F. Thompson, Gunter Hotel, San Antonio, W. C. Wieters 1, M. J. Rodriguez sur, B 4019, 460 ft to NE and 80 ft to NW. Schimmel Pet. Corp., Ft. Worth, G. Schaper 2, A. McSnyder sur, B 266, 550 ft S of No. 1.

Callahan County—E. R. Wilson, Cross Plains, J. C. Baum 3, CCSL sur, 300 ft W of No. 1; R. C. Cunningham 1, CCSL sur, 150 ft to S and E lines. Western Oil Sales Corp., Cisco, I. Slaughter 1, S 9, D&D Asy sur, 600 ft to W and 850 ft to N line. Lyda Oil Corp., Box 385, Cisco, W. M. Moore 4, S 3, GCSF sur, 360 ft SW of No. 2; 3, 300 ft N of No. 1. Ell (Cowboy) Evans, Cisco, J. Cottle 2, S 2994 TE&L sur, 450 ft S of No. 1. W. R. Andrews et al, Putnam, R. D. Williams 68, S 1, TE&L sur, 175 ft to N and 460 ft to E line. Kluner Bros., Cisco, R. A. Kelton 1, S 158, BBB&C sur, 1150 ft to W and 1050 ft to S line. Cranfill & Reynolds, Cisco, E. F. Bond 14, B 72, CCSL sur, 300 ft W of No. 13. T. B. Slick, Cross Plains, L. A. McDonough 4, R. Edwards sur, 390 ft E of No. 3. B. C. Lacey, Breckenridge, J. E. Crockett 5, B 52, CCSL sur, 750 ft to E and 150 ft to S line. J. Anderson et al, Cisco, S. S. Diller 1, S 48, Lun Asy sur, 500 ft to N and W lines. Harold A. Burt, Baird, A. T. Young 1, S 129, BBB&C sur, 150 ft to N and E lines.

Crane County—Marland Oil Co. of Texas, Fort Worth, Gibbs 1-DD, S 93, B X, F. Rooney sur, 1320 ft to S and E lines; Hughes-Gibbs 2, F. Rooney sur, S 93, B X, 990 ft to N and 330 ft to E line; E. S. Hughes C-4, S 86, B X, CCSD&RGNG sur, 330 ft to E and S lines; D-2, S 88, B X, 660 ft E of D-1; W. F. Durham 3, S 83, B X, 660 ft S of No. 2; 2, 330 ft to N and E lines; Cowden Bros. A-1, S 81, B X, 330 ft to E and S lines. Magnolia Pet. Co., Dallas, Univ. 3, S 34, B 30, Univ. Ld. sur, 330 ft to S and W lines; 1, S 39, B 30, Univ. sur, 330 ft to N and E lines. The

Counter-Balanced



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All Pioneer Oil Well Shooters

Texas Co., Ft. Worth, R. King 5, S 11, B 3, CCSD&RGNG sur, 330 ft to S and E lines; 10, S 85, B X, 330 ft to NW and SW lines.

Carson County—Marland Oil Co. of Texas, Ft. Worth, Burnett F-1, S 117, B 5, IGN sur, 450 ft to E and N lines; G-1, S 126, B 5, I&GN sur, 450 ft to E and S lines; H-1, S 125, B 5, I&GN sur, 450 ft to E and N lines. McMann Oil & Gas Co., Box 712, Tulsa, Okla., A. Bryan 3, Lot 107, B 4, I&GN sur, 330 ft to E and S lines; 1, 330 ft to N and W lines. Roxana Pet. Corp., Tulsa, Okla., E. F. Bryan 3, S 92, B 4, I&GN sur, 330 ft to S and E lines; 4, S 107, B 4, 330 ft to S and W lines. Marland Oil Co. of Texas, Ft. Worth, E. F. Bryan 2, S 92, B 4, I&GN sur, 330 ft to N and W lines. Magnolia Pet. Co., Dallas, Fee 1, S 91, B 4, I&GN sur, 330 ft to Nand W lines.

Comanche County—Trojan Oil Co., et al, Denver Ave., Ft. Worth, B. F. Barnes 1, J. Walker sur, 175 ft to E and 600 ft to S line.

Coleman County—Amerada Pet. Corp., Cisco, M. A. DeBusk 1, S 4, CCSL sur, 330 ft to N and E lines; J. W. Harris 98, J. Sanders sur, 440 ft S of No. 47. Archie Shaw, Burkett, W. T. Burns 16, A. Wickson No. 168 sur, 1950 ft to N and 2550 ft to E line. Roxana Pet. Corp., St. Louis, Mo., J. H. Bobbington 2, S 79, B. F. Rose sur.

Cooke County— Sun Oil Co., Dallas, A. Hyman 5, T. J. Moss sur, 300 ft W of No. 4; 6, 300 ft W of No. 5. John W. Hooser, Thomas Bldg., Dallas, J. A. Dennis 8-A, T. J. Moss sur, 300 ft N of No. 7. American Ref. Co., Wichita Falls, J. A. Dennis 1, T. J. Moss sur, 150 ft to E and S lines.

Caldwell County—Humble Oil & Ref. Co., Houston, Cardwell 1, J. Burleson sur, 150 ft to N and W lines; 4, 450 ft to SE and 150 ft to NE from W corner. W. B. Swearangen, Receiver, Lockhart, W. J. Tiller 4, J. Henry sur, 295 ft E of No. 2.

Clay County—John O'Neil, Wichita Falls, H. Boddy 1, B 36, ACSL sur, 150 ft to N and W lines.

Duval County—Buffum, Flowers & Young, Laredo, J. Benavides 1, S 1, B 38, E. Mes. Gr. sur, 175 ft to N and W lines.

Eastland County—Moore & Lewis, Eastland, R. F. Whittington 1, S 27, B 2, H&TC sur, 175 ft to N and 200 ft to W line. Green Prod. Co., Fort Worth, E. D. Jones 1, W. D. Moss sur, 150 ft to N and 300 ft to E line. Ed. V. Parsons et al, Ft. Worth, V. N. A. Blackwell 1, B 6, League 2, MCL sur, 1320 ft to E and 700 ft to N line. Arkansas Fuel Oil Co., Shreveport, La., C. U. Connellee 6, N. Ussury sur, 176 ft to S and 720 ft to E line. Jno. M. Gholson et al, Ranger, A. L. Duffer 1, Mathias sur, 3300 ft to E and 250 ft to S line.

Fort Bend County—Gulf Prod. Co., Houston, J. H. P. Davis 18, G. Waters sur, 100 ft to W and 500 ft to S line; 19, same sur, 2309 ft SE along E line from NE cor; B. J. Wheat 12, M. Young sur, 400 ft N of No. 8; West-Schevick 7, same sur, 696 ft E and 100 ft N of SW cor.

Freestone County—Kirby Pet. Co., Houston, J. L. Childs 1, Town of Wortham sur, 145 ft to NW and 75 ft to SW line.

Gray County—McMann Oil & Gas Co., Box 712, Tulsa, Okla., P. Worley 3, lot 83, B 3, I&GN sur, 6608 ft to N and 330 ft to W line; 6, S 83, B 3, I&GN sur, 660 ft to N and 330 ft to E line. Magnolia Pet. Co., Dallas, A. Holmes 1, S 106, B 3, I&GN sur, 330 ft to E and N lines. Prairie Oil & Gas Co., Borger, Worley & Reynolds 7, S 83, B3, 330 ft to S and 990 ft to E line.

Guadalupe County—Magnolia Pet. Co., Dallas, L. Marines 20, H. Cottle sur, 467 ft NE of No. 1. Mid-Kansas Oil Co., Tulsa, Okla., Pet. Bldg., M. Herrman 1, W. J. Ragsdale sur, 5555 ft to W and 1389 ft to S line.

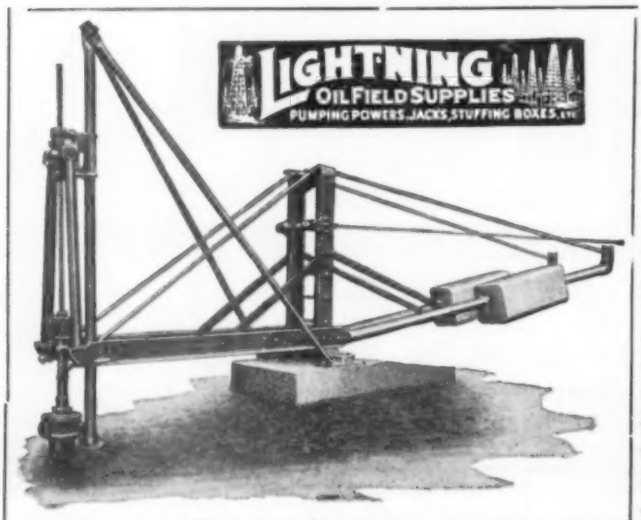
Grimes County—J. E. Puidt, Navasota, J. E. Cuthrell 4, O'Connor sur, 1200 ft to W and 170 ft to S line.

Hutchinson County—Prairie Oil & Gas Co., Borger, Johnson 37, S 4, B 4, D&SE sur, 330 ft to S and W lines; 36, S 20, B Y, M&C sur, 990 ft to N and 330 ft to E line; Weatherly 11, S 19, same sur, 330 ft to N and W lines; Johnson 38, S 64, B 46, H&TC sur, 330 ft to E and S lines. Marland Oil Co. of Texas, Fort Worth, Christian 2, S 8, M. Anglin sur, 330 ft to E and S lines; 3, same sur, 330 ft to W and S lines; 4, same sur, 323 ft to N and 330 ft to W line; 1, same sur, 330 ft to E and N lines; Weatherly A1, S 19, B Y, H&TC sur, 330 ft to N and E lines. Empire Gas & Fuel Co., Amarillo, J. F. Weatherly 10, S 19, B Y, M&C sur, between No. 6 and No. 5; 11, same sur, N of No. 7 and W of No. 6. Permian Oil Co., Amarillo, W. R. Harvey 1, S 5, B L, ET Ry sur, 330 ft to S and W lines. Devonian Oil Co., Tulsa, Okla., Johnson 6, M. Whitley sur, 330 ft to S and W lines. McMan Oil & Gas Co., Box 712, Tulsa, Okla., Holmes 9, lot 5, B G, M&C sur, 709 ft to W and 637 ft to S line.

Harris County—Marsalis Bros., Humble Sun Co. 9, J. Strange sur, 140 ft to S and 150 ft to E line. M&B Co., 1111 Leeland Ave., Houston, J. Scaregga 5, Scott sur, 330 ft W of No. 3. Gulf Prod. Co., Houston, C. Bryan 13, Wm. Scott sur, 300 ft NW of No. 12. Martin & Drake, Box 461, Humble, H. Wilson 1, HE&T Ry sur, 400 ft to N and 80 ft to E line. Humble Oil & Ref. Co., Houston, Simms-Smith 31, Wm. Scott sur, 75 ft E of No. 13.

Hardin County — Humphreys Corp., Mason Bldg., Houston, Gordon 1, P. S. Griffith sur, 15 ft to W and 25 ft to S line.

Jefferson County—Gulf Prod. Co., Houston, D. Roche 6, J. A. Veatch sur, 70 ft SE and 35 ft NE of W cor; 7, same sur, midway of No. 1 and No. 2, 50 ft NW of line; 8, same sur, midway of No. 1 and No. 2, 50 ft NW to lease line; A. L. Craig 8, T. Williams sur, 400 ft NE of No. 7 (Matagorda County); J. F. Weed 9, J. Douthitt sur, 201 ft SW along S from SE cor; J. Mann 4, same sur, 90 ft SW along NW from NE cor; Oakwood R. Co. 7, J. Douthitt sur, midway of No. 1 and



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For deeper pumping. Where, of necessity light load on pull rods is needed. Long stroke. Polish rod moves in perfectly straight up and down movement. Fulcrum point not over 12 inches above floor—will not get out of line like those highly elevated. Only light concrete foundation required—lowest cost to install. Weight 1250 pounds.

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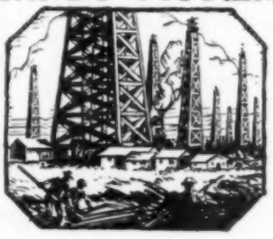

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THE ANDREWS STEEL CO
NEWPORT KENTUCKY

No. 3, and same to line. Yount-Lee Oil Co., Beaumont, McFaddin-Wiess-Kyle 18, P. Humphreys sur, 607 ft to N and 1278 ft to E line; 16, same sur, 457 ft to N and 1278 ft to E line; 17, same sur, 305 ft to N and 1278 ft to E line; Y-L Fee 12, Douthitt sur, 686 ft to W and 168 ft to S line.

Jim Hogg County—Magnolia Pet. Co., Dallas, Merchants Bank 9, B 415, F. M. Brister sur, 300 ft W of No. 8; B. De La Garza 13, S 291, S. C. Hendrix sur, 300 ft E of No. 10. Grayburg Oil Co., San Antonio, Weil Bros. 8, sur 81, B 15, 150 ft to E and N line. K. & S Corp., Laredo, R. Holbein 49, S 11, B 11, Las Animas sur, 40 ft to E and 66 ft to N line. Alworth & Stevens & Hild, Laredo, M. Garza 1, B 4, S 39, sur 39, 150 ft to SE and 660 ft to SW line. Simms Oil Co., Dallas, C. Palacios 15, B B, S. C. Hendricks sur, 300 ft W of No. 14.

Jack County—Guthrie, Colke & Ferguson, Wichita Falls, M. D. Snedeker 5, B 7, Batex O. Co. sur, 300 ft W of No. 4; 4, same sur, 300 ft W of No. 3; 3, J. Robbins sur, 300 ft E of No. 4. James Ciaric, Mag. Bldg., Dallas, F. G. Stewart 1, NW¼ S 2, BBB&C sur, 350 ft to E and 300 ft to S line. Buttram Pet. Corp., Okla. City, Okla., C. K. Cullers 2, S. Chairs sur, 686 ft W of No. 1.

Limestone County — E. L. Smith Oil Co., Mexia, A. E. Rosson 1A, B 30, R. Ray, Lloyd sur, 150 ft to S and E lines. Pure Oil Co., Mexia, D. Oliver 1A, D. Sullivan sur, 600 ft NE of No. 1.

Montague County—Texhoma Oil & Ref. Co., Wichita Falls, J. W. Rowland 2B, E. Votaus sur A 827, 150 ft to W and 450 ft to S line; C1, same sur, 150 ft to E and S lines; 3B, same sur, 150 ft to S and E lines; 14, J. Chambliss sur, 288 ft N of No. 8. F. H. E. Oil Co., Nocona, N. J. Howard 3B, Chambliss sur, 450 ft to S and 150 ft to E line; M. H. Salmon 1B, W. P. Zuber sur, 150 ft to S and W lines; A3, S. Little sur, 372 ft to E and 750 ft to S line; 2B, W. P. Zuber sur, 300 ft N of No. 1. The Texas Co., Wichita Falls, J. W. Maddox 2B, J. Chambliss sur, 710 ft to N and E lines; 1D, G. W. Thompson sur, 150 ft to N and W lines; M. H. Salmon 2C, W. M. Zuber sur, 200 ft to N and W lines. J. B. Oldom 25, J. Chambliss sur, 50 ft W of No. 3; 23, same sur, 40 ft E of No.4. Pure Oil Co., Mexia, J. W. Rowland 3, E. Votaw sur, 300 ft N of No. 1; J. W. Maddox 5, C. W. Thompson sur, 400 ft E of No. 1. A. R. McElreath & Suggett, Wichita Falls, M. G. McCracken 1, S 56, B 57, KCSL sur, 150 ft to N and E lines. Barnsdall Oil Co., Tulsa, Okla., N. B. Howard 1, J. Chambliss sur, 150 ft to S and E lines. Arco Oil Co., Box 1020, Wichita Falls, M. H. Salmon 1, W. R. Zuber sur, 150 ft to S and W lines. Farlyn Oil Co., Humble Bldg., Houston, J. W. Maddow 4, G. W. Thompson sur, 300 ft of No. 3.

Milam County—Union Prod. Co., Rockdale, A. Strelsky 12, Chambers sur, 450 ft NW of No. 12; 12, same sur, 300 ft NW of No. 11; 11, same sur, 300 ft NW of No. 10; 10, same sur, 300 ft NW of No. 9; 9, same sur, 300 ft NW of No. 8; 8, same sur, 300 ft NW of No. 7. Brady Bros., Minerva, Baldridge Bros. 5, T. J. Chambers sur, 152 ft to S and NW of No. 4. Triangle Oil & Gas Co., Rockdale, J. F. Horton 2, T. S. Arnett sur, 155 ft to S and W lines. Coffield & Hall, Rockdale, A. O. Dee 3, 180 ft to N and 260 ft E to well.

MuCullouch County—J. C. Van Bebu & C. F. Lehman, Lohn, J. K. Shelton 1, S 1061, sur 1061, 300 ft to SW cor.

Navarro County—Sun Oil Co., Dallas, W. Smith 2, Wm. Hudson sur, 150 ft to NW and NE lines. Carrita Oil & Gas Co., Corsicana, T. J. Tramel 1, R. H. Matthews sur, 150 ft to W and S lines.

Palo Pinto County—Edgar T. Hast et al's F&M Bldg., Fort Worth, W. T. Ormes 1, S 31, B 3, T&P sur, NE½ of NE½; L. A. Cardwell 1, S 30, B 3, T&P sur, 600 ft to E and 850 ft to S line. R. H. Manning, Fort Worth, T. J. Moss 1, S. Townsend sur, S 13, B 15, 150 ft to E and 450 ft to S line.

Panola County—Goldenrod Oil Co., Wilson Bldg., Dallas, R. Johnson 3, C. D. Bradberry sur, 450 ft to W and 1290 ft to S line.

Reagan County—Big Lake Oil Co., Best,

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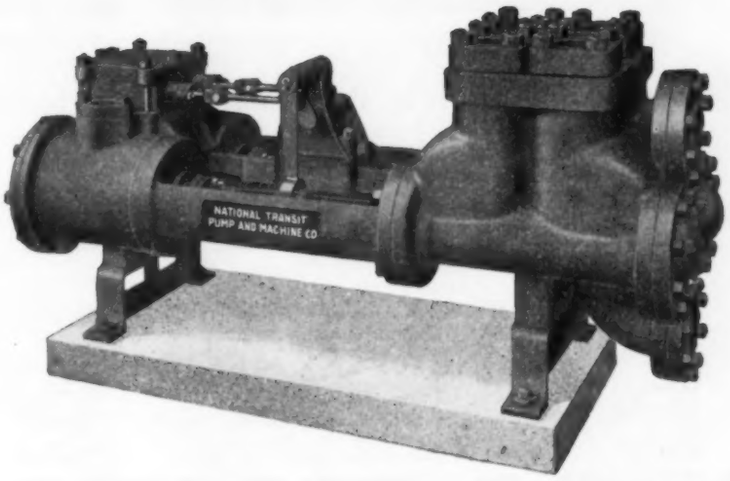

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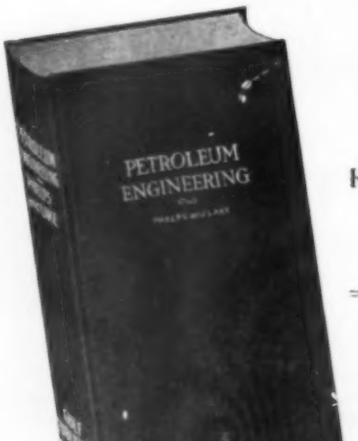

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Refugio County—W. J. Pearson et al, Corpus Christi, W. Heard 1, Refugio Town Tract, 250 ft to S and S lines.

Shackelford County—Milham Corp. of Texas, San Antonio, Z. W. Casey 14, S 581, TE&L sur, 300 ft SW of No. 11, 17, same sur, 300 ft NW of No. 15; 18, same sur, 300 ft SW of No. 15; 19, same sur, 300 ft SW of No. 14; L. Clausell 16, S 582, TE&L sur, 300 ft SE of No. 15; 17, same sur, 300 ft SW of No. 15. Roeser & Pendleton, Inc., Fort Worth, A. Frye 17, S 384, TE&L sur, 260 ft SW of No. 16; 18, same sur, 250 ft SW of No. 17. Amerada Pet. Corp., Box 1004, Cisco, W. I. Cook 2, S 85, ET Ry sur, 1020 ft S of No. 1; W. Y. & R. A. Davis 2, S 28, B 13, T&P sur, 150 ft to N and W lines. J. S. Cosden et al's Fort Worth, G. E. Reynolds 1, S 13, B 11, T&P sur, 150 ft to S and 331 ft to W line. Tidal Oil Co., Fort Worth, E. Flippen 1, S 69, B 11, T&P sur, 150 ft to E and 750 ft to S line. St. Marys Oil & Gas Co., St. Marys, West Va., R. S. Broadfoot 13, S 20 and 69, Bay O. & L. Asy. sur, 50 ft N of No. 8.

Stephens County — Landreth Prod. Co., Breckenridge, H. Gratz 3, S 2027, TE&L sur, 1300 ft to N and 582 ft to W line; 4, same sur, 1620 ft to E and 1301 ft to N line; R. Elliott 1, S 55, B 7, T&P sur, 500 ft E of SE cor of S 37. Barkley Conway & Gholson, Box 998, Ranger O. C. Pratt 1, S 48, B 6, TE&L sur, 200 ft to S and W lines. T. K. Simmons, Tulsa, Okla., B. C. Harvey 1, S 6, B 14, T&P sur, 660 ft to N and W lines; B. F. Coody 1, S 41, B 4, T&P sur, 330 ft to W and S lines. Texas Fidelity Oil Corp., F&M Bldg., Fort Worth, D. C. Pratt 2, S 69, B 6, T&P sur, 600 ft to W and 500 ft to N line. Humble Oil & Ref. Co., Cisco, W. G. Cockrell 1, S 7, B 6, T&P sur, 258 ft to E and 250 ft to S line. Kenridge Oil Co., Box 407, J. M. Ward 1, S 7, B 5, 2&P sur, 150 ft to N and W lines. Barkley Conway & Gholson, Ranger, W. H. Bradford 1, S 49, B 6, T&P sur, 200 ft to S and E lines.

Starr County—W. L. Pearson et al's Corpus Christi, Neuces Hotel, M. Pefley 1, S 933, 150 ft to N and 250 ft to E line.

Sabine County—The Texas Co., Shreveport, La., L. S. Bell 1, D. McDonald sur, 5650 ft to N and 3800 ft to W line.

San Patricio County—E. Leach, San Antonio, D. L. Freeman 1, B 58, 150 ft to S and 250 ft to N line.

Tyler County—S. S. Raymond, Shreveport, La., H. L. Stone 1, BBB&C sur, 150 ft to W and 450 ft to SW line.

Throckmorton County—M. R. Braun, Texas Hotel, Fort Worth, Reynolds C. Co. 1, S 34, BBB&C sur, center of SW¼ of NW¼.

Upton County—Marland Oil Co. of Texas, Fort Worth, B. H. Estep 8, S 18, MK&T No. 3 sur, 990 ft to E and S line; 6, same sur, 330 ft to W and 990 ft to S line; 7, same sur, 990 ft to W and S lines; M. C. Powell 1, S 1, B 3½, S. H. King sur, 330 ft to E and N 330 ft SW cor; 1, S 1, same sur, 330 ft to W and then N 330 ft to SW cor; T. E. Shirley 1, S 10, B 3½, CCSD&RGNG sur, 416 ft to W and 250 ft to S line; A. S. Burleson 3, J. K. King sur, S 100, B 1, 330 ft to SW and 330 ft to NW cor. Roxana Pet. Corp., McCamey, B. H. Estep 2, S 18, B 3, MK&T sur, 300 ft to E and 330 ft to S line; 3, same sur, 990 ft to S and 330 ft to E line. McMan Oil & Gas Co., Box 712, Tulsa, Okla., M. I. Baker 2, lot 8, B R, E. G. Groom sur, 330 ft to N and 250 ft to W line. Independent Oil & Gas Co., Fort Worth, A. S. Burleson 5, S 100, B 3, T. C. Jones sur, 535 ft E of No. 4. Humble Oil & Ref., Big Lake, A. S. Burleson 5, T. C. Jones sur, 330 ft to N and W lines.

Wichita County—R. R. Clark & M. Campbell, Wichita Falls, Ward & Todd 9C, B 13, GCSF sur, 1074 ft to N and 1126 ft to E line; 7C, B 7, same sur, 459 ft to E and 448 ft to N line; 8C, same sur, 459 ft to E and 751 ft to N line. Magnolia Pet. Co., Dallas, L. C. Ramming 24, S 3, Candrilla I. Co. sur, 300 ft N of No. 18; S. S. Fassett 4, D. Land & C. sur, 300 ft to E of No. 3; 5, same sur, 300 ft W of No. 2. The Texas Co., Electra, Wag-

goner 308, M. Meade sur, 31 ft to W and 490 ft to N line. Louisiana Oil & Ref. Corp., Box 1117, Shreveport, La., Waggoner-Godley 6, B 85, RRVL sur, NE cor and W of No. 5. Walter Prechell, Staley Bldg., Wichita Falls, E. M. Goetze 1, B 2, WA Co. Ry sur, 150 ft to S and W lines. Humble Oil & Ref. Co., Wichita Falls, Kemp & Kempner 1, B 54, KWVF sur, 150 ft to S and E lines. Homer Lee, Wichita Falls, J. & J. Weibener 18, BBB &C sur, 300 ft W of No. 16. Simms Oil Co., Dallas, W. H. Chilson 3, B 3, DCSL sur, 275 ft E of No. 2. L. G. S. Oil Co., Iowa Park, B. N. Ferguson 4, B 12, BNF subdivison, 350 ft N of No. 1. Grant G. Beandoin, Bradford Bldg., Wichita Falls, Van Loh 1, S 1, A-513, T. E. Williams sur, 150 ft to N and 450 ft to E line. R. H. Cook, Electra, Throckmorton 2, S 1, Tarrey sur, 350 ft SE of No. 1. L. N. Offenheimer, 1314 S. Denver St., Tulsa, Okla., Birk & George 1, B H, Cr. LA sur, B 23, 150 ft to S and W lines. Bridwell & Heydrick Oil Co., Wichita Falls, Bridwell & H. Co. 1, B 14, GC&SF sur, 15 ft to N and E lines.

Webb County—Murchison & Fain Oil Co., San Antonio, Garcia 3, B 58, J. M. Littig sur, 900 ft to N and 1489 ft to W line; 2, same sur, 900 ft to N and 1189 ft to W line. O'Hern & Seacord, Sames-Moore Bldg., Laredo, Benavides 2, sur 174, B 12, 160 ft to NE and NW lines. A. J. Malone, Laredo, H. L. Fanster 1, Cometas Gr. sur, 790 ft to N and E lines. Sun Oil Co., Dallas, Bruni 7, Las Albercas sur, 400 ft W of No. 6. R. F. Duggan, R. E. Lee Hotel, Laredo, J. E. Neal 1, S 1008, 1400 ft to W and 1050 ft to S line.

Wilbarger County—Phillips Pet. Co., Bartlesville, Waggoner HH1, S 42, B 4, H&TC sur, 375 ft W of No. 5; 1, same sur, 150 ft to E and S lines. Milham Corp. of Texas, San Antonio, Waggoner 19L, S 42, B 4, H&TC sur, 50 ft S of No. 6L.

Wheeler County—Magnolia Pet. Co., Dallas, C. E. Johnson 1, S 40, B 24, H&GN sur, 330 ft to N and E lines. Smith, Foreman, Smith, Box 549, Amarillo, J. Johnson 1, S 88, H&GN sur A5, NE cor of SE¼.

Winkler County—R. S. Matthews, 707 Cosden Bldg., Tulsa, Okla., Cowden 1, S 7, B A 57, 2640 ft to N and E lines.

Wise County—Pioneer Pet. Co., Greenwood, F. T. Milligan 1, C. C. Williams sur, 600 ft to NW and SW lines.

Young County — The Texas Co., Wichita Falls, Tidwell 18, J. A. Hopkins sur, 1539 ft to E and 2417 ft to S line; Prideaux 2, I&GN Ry sur, 608 to S and 150 ft to E line. Panhandle Ref. Co., Wichita Falls, Matthews 1, A. Rohus sur, 150 ft to N and E line; Prideaux 2, A. McMullen sur, 300 ft E of No. 1. Atlantic Oil Prod. Co., Wichita Falls, Keen 1, B 3041, 1650 ft to E and 1350 ft to N line; Rachuig 10B, S 4, BBB&C cor, 300 ft W of No. 8. Madden & Hurt, Olney, Benson 8, B 1451, TE&L sur, 300 ft W of No. 4; 9, same sur, 300 ft N of No. 7. Robert Oil Corp., Wichita Falls, G. P. Stewart 8, D. Dawson sur, 300 ft W of No. 2; E. Rogers 16, S 166, TE&L sur, 450 ft to W and 150 ft to N line. Phillips Pet. Co., Bartlesville, Okla., S. E. Sinder 5, R. Wilson sur, 1770 ft to N and 512 ft to W line. Simms Oil Co., Dallas, W. N. Gegg 4, B 17, YCSL sur, 300 ft E of No. 1. Four Oil Co., 1st Nat. Bk., Wichita Falls, H. C. McCaghren 4A, S 1367, TE&L sur, 150 ft to N and 680 ft to W line. The Texas Unity Oil Co., Dallas, W. Hunt 1, B 240, TE&L sur, 150 ft to W and S lines.

Zapata County—Maurer & Duggan, Laredo, Cuellar 3, S 246, sur 244, 750 ft SW of No. 1.

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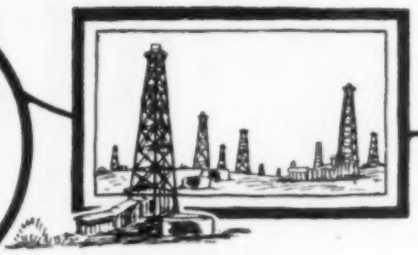

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to the origin of salt domes, especially in America, appears to be unsound, and the error results from an inaccurate or distorted conception of the true form and character of our salt domes. It is hoped that with a more accurate, more detailed picture of American salt domes such as this volume attempts to present, students of salt-dome origin may clarify and bring into accord their several theories."

The subject matter in the volume, "Geology of Salt Dome Oil Fields," was either read in full, or by title at the Houston meeting of the American Association of Petroleum Geologists, in March, 1924. Most of the papears were later printed in the Association Bulletin, before they were finally assembled in book form.

The original plan included a brief, accurate description of each of the known salt domes, and although this list is not yet complete, facts concerning a number of typical salt domes are presented with sufficient detail to portray adequately the true nature of this remarkable type of geologic structure. Along with the descriptive papers, and based largely on the data contained in them, are several theoretical and interpretative studies, together, also, with some discussion of European salt domes.

To illustrate the papers there are 219 figures, most of them maps, and twelve plates.

The papers included in the book, with their authors, are as follows: Origin of North American Salt Domes, E. DeGolyer; The Structure of the Salt Domes of Northwest Europe as Revealed in Salt Mines, W. A. J. M. van Waterschoot van der Gracht; Petrography of Salt Dome Cap Rock, Marcus I. Goldman; Geology of the Salt Dome in the Carpathian Region of Rumania, I. P. Voitesti; Rumanian Oil Fields, S. L. Mason; The Upthrust of the Salt Masses of Germany, Hans Stille; The American Salt-Dome Problems in the Light of the Roumanian and German Salt Domes, Donald C. Barton; Interior Salt Domes of Texas, Sidney Powers; Interior Salt Domes of Louisiana, W. C. Spooner; The Bayou Bouillon Salt Dome, St. Martin Parish, Louisiana, David Donoghue; Section 28 Salt Dome, St. Martin Parish, Louisiana, David Donoghue; The Five Islands, Louisiana, Francis Edward Baughan; The Jennings Oil Field, Acadia Parish, Louisiana, Donald C. Barton and R. H. Goodrich; Pine Prairie Salt Dome, Donald C. Barton; The Welsh, Louisiana, Oil Field, Lyman C. Reed; The Sulphur Salt Dome, Louisiana, P. K. Kelley; The Edgerly Oil Field, Louisiana, H. E. Minor; The Spindletop Salt Dome and Oil Field, Jefferson County, Texas, Donald C. Barton and Roland B. Paxson; The Big Hill Salt Dome, Jefferson County, Texas, A. S. Henley; The Saratoga Oil Field, Hardin County, Texas, John R. Suman; The Batson Oil Field, Hardin

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Copies of the book may be secured from The Gulf Publishing Company, P. O. Box 1307, Houston, Texas. Price, $6.00.

Philmack Company Open Fort Worth Office

Tulsa, Oklahoma. — The Philmack Company has opened a Texas office at Fort Worth, with G. H. Collingwood in charge. He recently resigned from the Gypsy Oil Company to take his new place. The company has its Texas headquarters in the F. & M. bank building.

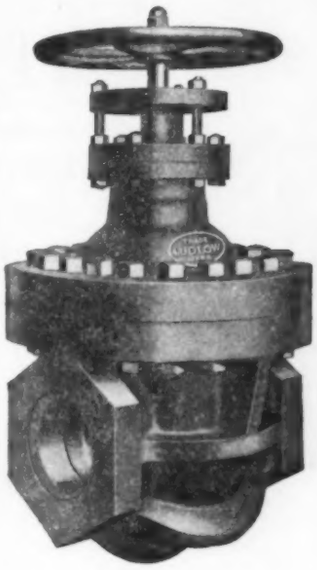
The Philmack Company is headed by Waite Phillips, whose company bearing that name, was sold last winter to the Barnsdall Corporation. Other members are Otis McClintock and Gillette Hill.

Right now the company is building an organization, which will operate over the Mid-Continent area.

Another man to join the Philmack Company is A. I. Levorsen, who will have charge of geological work. He has been with the Gypsy Oil Company here.

Abandon Deep Test

Casper, Wyo.—Continental Oil Company is preparing to abandon its Geary dome test, section 32-34-78, near Casper, at a depth of 3050 feet. The hole was drilled to 4897 feet more than three years ago. The company opened up the hole recently and planned to drill the test below 5000 feet. Re-drilling the old hole has been very slow and tedious.



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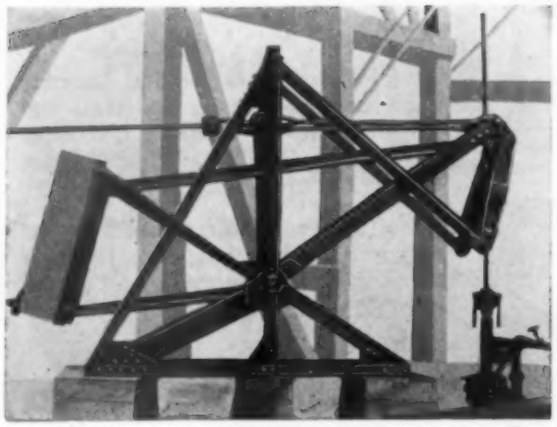

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NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Oversize Hydraulic Valve Takes Well in Field

Houston Pump and Supply Company Hydraulic Valve

The oversize hydraulic standing valve, manufactured by the Houston Pump & Supply Company, Houston, Texas, and distributed by all the major supply houses, is meeting with an enthusiastic reception in the field.

All parts of the valve are machined from the solid bar.

The locking device snaps into place after the valve is made up, and is said to prevent backing off of the lower part of the valve. This feature is of prime importance inasmuch as the vibration in a pumping weld tends to loosen this joint in the standing valve.

Oversize is obtained by using a ball and seat that is the next size larger than the standard used in a valve of the same nominal size.

The cage makes up firmly by means of shoulders on the body and cage. giving a secure fit.

The lower body is threaded for both oversize gas anchor and perforated pipe. This body is 10½ inches long, giving ample space for chain tongs in making up.

A liberal factor of safety has been provided in the design of the valve.

The valve is regularly made in the all-steel, but can be furnished with brass cage and bronze ball and seat if so desired.

Further information can be had from the manufacturers.

Climax Company Issues Book on Lubrication

The Climax Engineering Company, Clinton, Iowa, are distributing a revised edition of their "Lubrication Instructions for Climax Trustworthy Engines," a comprehensive treatise on the subject of proper lubrication of heavy-duty, medium-speed industrial engines.

The book was originally prepared by the technical staff of the Vacuum Oil Company in collaboration with the Engineers of the Climax Engineering Company. It has been brought up-to-date and amplified, until now it is a well rounded discussino of gas engine lubrication.

Reliable lubrication knowledge is comparatively scarce and for this reason this manual will be welcomed by engine users. It contains a large amount of information dealing with lubrication of Climax engines in all classes of service, together with recommendations of proper lubricants and directions as to their use. The book is well illustrated, with diagrams and halftones.

Copies will be sent to users of Climax engines and power units, as well as to others interested in the proper lubrication of industrial engines. Address the company at Clinton, Iowa, or apply to their authorized parts and service stations.

California Operators Find New Way to Use Plug

Users of the Baker Sure-Shot Cement Plug, on the Pacific Coast have recently developed a new method of running this device. This consists of welding the eyes in rods and running the plug on the tools, keeping a hold on the plug until the pipe and all are on bottom.

This is done in one of two ways: Either by setting the drilling clamps on the casing collar and taking a stretch on the line, then setting up the clamps, letting the pipe and tools down together or clamp the drill line to the dead line in the casing block and in that way let the pipe, tools, plug and all down together, breaking loose after the pipe is on bottom.

By running the Baker Cement Plug on the drill line it is sure of getting loose, whereas when it is run on the bailer you take a chance of pulling the sand line in two.

New Transit Gas Engine Gas Compressor

An outfit designed especially for compressing natural gas has lately been introduced by the National Transit Pump and Machine Company, Oil City, Pennsylvania. It is known as the Transit Model 26, horizontal twin gas engine gas compressor.

A notable feature of the design is that with the exception of the main frames and cam shafts, all parts that are usually made right and left hand on a twin engine have been made interchangeable, so that they can be used on either side of the engine.

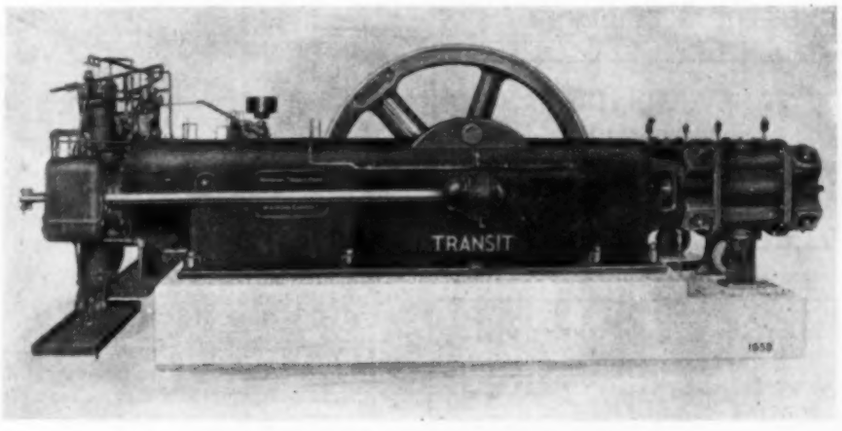
In working out the frame design, every precaution was taken to insure the centers of gravity of the cross sections being as nearly as possible to the center line of the cylinder. Each end of each frame ends in a heavy internal flange. The cylinder is bolted to this flange on one end, and the compressor adaptor and compressor to the flange on the opposite end. The portion that forms the crank pit is of box section.

Top and bottom bored guides are provided for the main crosshead. The compressor crosshead is carried on a bored bottom guide. Guides and crank pit are separated from the cylinders by partition plates have stuffing boxes through which the piston rods pass.

Adequate openings are provided into the frame, fitted with easily removable cast iron covers.

Each cylinder is a seperate casting with its inlet valve on the upper side and the exhaust valve on the lower side. A water jacket space is formed around each valve opening. The cylinder barrel projects into the main frame, and is sealed at the inner end with a rubber packing ring and a gland, leaving it free to expand. Each cylinder is secured to its frame by studs extending through a flange on the outer wall of the cylinder.

The cylinder head is cast iron, in-



National Transit Gas Engine Gas Compressor

PHILLIP MAVERICK
PETROLEUM GEOLOGIST
Telephone 93
Ricker & Dodson Bldg.
San Angelo, Texas

Maurice Hirsch & Ben J. Brown
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ternally ribbed and independently water jacketed with cooling water inlet and discharge flanges on its outer face. The face of the head next to the fire is made conical in shape, without any ribs.

The piston is made of cast iron and is air cooled. The connection to the crosshead is through an open hearth steel piston rod turned to size, screwed and riveted into the piston, and screwed into the crosshead on the other end and locked with a jam nut.

Lubricating oil is prevented from following the rod and coming in contact with the hot piston head. A stuffing box in the partition between the cylinder and the crank case retains practically all the lubricating oil that falls on the rod on the crank case side of the partition.

The main crosshead is a steel casting. Crosshead shoes are of the hinged type, adjustable for wear by menas of eccentric bolts passing through lugs on the crosshead.

Side rods driving the compressor are attached to arms on projecting ends of the wrist pin.

The connecting rod is an open hearth steel forging with a solid end for the wrist pin and a marine type box for the crank end.

The crank shaft is on open hearth steel forging 11½ inches in diameter throughout its length. Steel oil rings are shrunk on the shaft before the cranks are attached to prevent the oil from the main bearings following along the shaft.

Main bearings are of the standard quarter box construction. The bottom and side shells are steel castings, the top shell is of iron. Shims are provided between the bottom and side shells and the top and side shells.

Inlet and exhaust valve casings are separate from the cylinders. The springs and guide pistons are interchangeable. The exhaust valve casing is water jacketed, water being carried very close to the seat.

Valves are cam operated. The cam shaft is driven by means of a drag crank and link from the end of the crank pin. An adjustable coupling in the cam shaft permits setting the valves with sufficient accuracy without disturbing the gears. The cam, cam levers and rollers are completely enclosed. Push rods with spherical ends transmit the cam motion to the inlet and exhaust valve levers. These are adjustable with the engines running. Valve springs are of a large diameter and are stressed very moderately.

The air starting valve is operated from the same cam that operates the inlet and exhaust valves.

In designing the regulating valve care has been taken to maintain the proportion of gas and air uniform for every portion from no load to full load.

The engine is equipped with make and break igniter supplied with cur-

Invention Wanted
Old and thoroughly honorable manufacturing concern wants to get into oil country specialty field. If you have a new idea or patent, address Box 1112, Shreveport, La.

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County and District
Catalog on Application
HEYDRICK MAPPING COMPANY
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JESSE R. STONE
Formerly Assistant Examiner
United States Patent Office
Andrews, Streetman, Logue & Mobley
12th S. Union N. Bk., Houston, Texas

rent from a five cell storage battery through a spark coil.

A double acting oil pump is located in a sump tank beneath the frame. Oil drains into this tank from the engine frame and from the cam shaft brackets on the side of the frame and cylinders. The underside of the double acting pump delivers this oil to a filter. The uper side forces the fresh oil from the filter into a glass reservoir or stand pipe located above the engine. Oil in excess of that which is fed to the bearings, overflows back to the sump tank. A McCord lubricator supplies lubrication for the cylinders and exhaust valve stems.

Further information may be obtained from the company by requesting bulletin No. 410.

Appointed Sales Manager

Announcement is made of the appointment of D. A. Cleveland as sales manager to handle California sales for the Regan Sales Company. Mr. Cleveland is well known in the California fields, having been associated with several well-known oil equipment companies and he has a host of friends on the Pacific Coast.

Atmore Company Moves

Tulsa, Okla.—Offices of the Robert N. Atmore Company have been removed from 20 South Madison street to 913 East First street, where larger space has been obtained. Robert N. Atmore, president of the company, has just returned from an extensive trip to California and Texas fields. Miss Helen Irene Betts, acting secretary of the company, now is on a trip through the North and East.

Dunn in New Quarters

Tulsa, Okla.—The Dunn Manufacturing Company have moved from their old location at 309 West First Street, to 215 East Archer Street in the Charles Page Building. In their new location they have additional space and trackage in the rear and having increaesd thier facilities for service and size of stock, they are now carrying a complete line of tools and parts in Tulsa manufactured by their company.

Moving to Tulsa

Tulsa, Oklahoma. — Offices of the Ohio Mid-Cities Corporation are being moved from Binghamton, New York, to Tulsa. D. S. Parshall, the president, has been here recently making arrangements for the move. The company has leases and royalty interests in Lincoln and Pottawatomie Counties.

D. H. Collins has been named purchasing agent for the Independent Oil & Gas Company of Texas, with headquarters at Fort Worth.

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50,000 ft. 2-inch used line pipe.
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One String 6″ Rotary Drill Pipe with Tool Joints.

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LETTERS OF Paul Peebles P.S.G.

My dear Cleopatra:

Cleo, honey, I have always hesitated to dictate my letters to you to a young lady stenographer on account of, honey, that it was such a personal matter between us—I mean the letters are, that I just could not bring myself to have a girl come in and sit down close me while I was thinking so pointedly about you as I am when I am writing to you. Now I do not mean, honey, that there is any time that I am not thinking about you, only more so when I am writing.

But now I have learned about a new scheme of having stenographers do your letter writing that fixes it up so that having her write for me is just as personal as writing to you my own self, on account of she does not hear what I say to you while I am saying it. I mean honey that it is a new scheme to you, but it is old stuff with me, only I have not never had nothing to do with it before my ownself. I have got a good girl 2 do the writing for me, whitch can spell pretty good, only it aint the same kind of spelling I am used to, but I guess you can read it alright.

This here system whitch I am talking about is called a dictaphone, which I know honey does not mean nothing to you unless I explain it to you. I know you are old enough to remember when Mr. Thos. A. Edison who is an inventor who is almost as well known as I am for the inventions he has patented, first made a graphophone. Well that first kind he made you remember you had to listen to through some tubes in your ears to hear it and I had to pay a dime to listen to the first one I ever heard. Well later on somebody made a rotary for the phonograph, so that first model was about to be junked, so they changed it around to make a dictaphone out of it.

How it works is they have got a kinder of a drum on it only it aint got no wheel on one end, and on it fits a 2½-inch wax pipe about four inches long. It looks a whole lot like a tool joint screwed together.

This here wax pipe turns around on the drum which is run by a little electric motor that is hid down inside of the thing so you can't see it, and it has a friction drive to start and stop it with, only the lever is only a button to press with your thum and is on the end of a wire.

The way you use it you talk in a little cup like the mouth thing on a telephoine, only in place of a wire it has a little sample model of somebody's idea of an all-metal drilling hose. This makes your voice do something that makes something on the wax tool joint so that it makes what you say like it is on a regular phonograph record. It makes a fellow feel like a fool to go off in a room by himself and talk to it like he was practicing up a speech. It has some kind of a ratchet arrangement on it so that it runs across in place of all piling up in one place, and a bell rings when you have said enough. It has got a hole lot of sense, don't you think, hunny?

Well then you give the wax tool joint to this girl I was telling you about and she puts it in another machine which has some ear things on it like a radio so that she can hear what it says and not nobody else which might be hanging around to hear what I say to you, and she writes it down on a typewriter and that is all there is to it. I am going to try this system for awhile and see how you like it, and if you can read it as good as you could when I spelled like me and you understand, well maybe it is a good scheme after all.

I did not go nowhere last week except to a ball game—I mean a foot ball game only I guess you do not care about what kind of a game it was and I did not neither on account of I had bet all I had on the worlds series with the usual results. And I am just mentioning going to the game in the case I was seen there by somebody what wood go and tell you some lie about me being there with a lady and buying pop and peanuts for her which is a lie because she did not want no pop so I just bought some for my ownself and also I just bought one bag of peanuts because they cost a dime at the ball bame for a nickels worth and neither one of us was very hungry.

Then Sunday I was planning to come down to see you, only I got busy on something else and had to take the widow where I boards out riding in my Henrietta and could not get off to come down there.

Sunday morning I went down to the railroad station to see who all was going away on the train whitch is one of my Arkansas habits which I have not altogether got over yet, and while I was down there I met that fellow Montgomery which works for Mr. Scott what runs the S. P. railroad, and right away he wanted to know about me having a special train to the Shreveport fair this year like I done last year and kinder showed Shreveport some stuff. Well that was the first I had thought about it in nearly a year, but these railroad fellows always remember their good customers that hire special trains from them. So that reminded me that I aint heard nothing from that bunch up there in Shreveport and I am wondering if Kirby Smith's boarding house has burned down or something and Louisiana is out of the notion of having a fair. I aint heard nothing from George Baird or Joe Elam, or even Olympia about having any Paul Peebles Day at the fair so that all the boys will come in from the fields. Maybe it was such a big day last year that the old town hasn't recovered from it yet.

But hunny I aint going to write to them first. If they want me to come up there again to help them put over there fair, well maybe I would do it if I was not too busy about then, but I am passing up the Dallas fair this year kinder thinking maybe they would want me to come up to Shreveport, and Beaumont might want to pull a good stunt over there this year too, since they have gotten into the oil town class.

Of course the railroad fellows are after me to go to both of those fairs on account of they know if I go it will be a big crowd to go along with me and they want to sell them tickets. So I am going to see them some more and if they talk right I might get busy with Charley Lane and some more of the boys that were with me last year and see if Mr. Farish will lend me his big band again and go up there so they can have one good day at the fair this year.

I was kinder planning maybe I would go up to Tulsa this week to the engineers meeting and make them a talk about some mechanical problem which might be worrying them but Julius Fohs did not put me any place on the program. So you see what they miss by it and it does not make any difference to me, because anyhow I do not know if they would have paid my expenses to come up there or not, and that is the only way I can work in that profession on account of me having an amateur standing because I never have had any pay for engineering work yet.

Now, hunny, like I said, you do not need to be worried about me having a girl write this for me, because like I said she was not sitting close to me when I said it in the machine which I was telling you about, and it is kinder like sending a telegram the way it works, only it does not cost as much money.

Your Loving Paul.

SAVE FISHING EXPENSE

The Guiberson Socket Takes Hold on— The First Trip Down!

There is no greater feeling of relief than when the socket catches ON THE FIRST TRIP DOWN.

That is exactly what GUIBERSON Multiple Sucker Rod Socket does. Equipped with four shells, each with a set of slips and a spring, the GUIBERSON Socket will take hold of any of the diameters of a sucker rod. One of the slips is certain to catch the projecting end, whether it be rod, pin, box, or coupling.

Slips are one piece, three-forked, so they cannot be pulled out and lost in the hole. Each shell is interchangeable with any other, and each set of slips fits into any shell, insuring quick replacements.

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GUIBERSON

BETTER BE SAFE THAN SORRY

Say you saw it in The OIL WEEKLY

SQUEAKS FROM THE BULL WHEEL

Bowlegs Indians Waxing Wealthy

One of the Indian families bidding for wealth and fame in the development of the Seminole City field is the Bowlegs clan. Just how these Indians acquired such a name is a matter for the guessers and one guess would be as good as another.

Anyway an ownership map of that area reads just like the Bowlegs clan had come down in a drove and gobbled up some of the oil wealth of Oklahoma. There is a Winnie Bowlegs, Billy Bowlegs and a Lucy Bowlegs. A glance at the map indicates that the girls have it. And the name is older than short skirts at that.

"If the woman who dresses quite proper,
Doesn't soon find something to stop her
From wearing men's clothes,
The Lord only knows
The kids won't know Mommer from Popper."
—Pure Oil News.

Girl Hikers (to Motorist)—"Give us a ride, Mister?"

Motorist—"You're walking north, and I'm driving south!"

Girls—"Well, don't you know how to turn the car around, yet?"

Last week a driller and his wife were riding out from Tulsa in their flivver and he stopped the car in front of a soft drink joint and held the baby while she went in and got a drink. When she came out, she said: "I will hold baby now while you get a drink."

He handed her the baby and said: "I ain't dry now."—Bridgeport Driller.

Woman Customer: I want to get a corset, to put on around the house.

Absent-minded Clerk: How large is your house.—Magnolia Oil News.

There was a young toolie named Mack,
With his girl went to blow in some jack.
He said, "Ain't this class?"
"I've run out of gas,"
And the poor girl is still walking back.
—Bridgeport Driller.

Anxious to Please

It was their first target practice. The officer had worn his army patience thin over these guardsmen. They just would not fire volleys.

In disgust, he finally bellowed, "Fire at random."

A rookie from Duck Hill yelled: "Which one is he?"

He (at the beach)—Why so depressed?

She—It makes me sad to think I had to refuse you.

He—Oh, cheer up! One refusal does not make a summer.

Too Popular

"Do you think my daughter would be better if she had her tonsils cut out?" asked the mother.

"No!" growled the hard-boiled family doc. "What she needs is to have some of her dates cut out."

A Fair Start

College Grad's Mother—"Here's a letter from our boy at last."

The Old Man—"Has he got a job yet?"

Mother—"Yes, he's washing dishes in a restaurant."

The Old Man—"That's good. He told us he was going to clean up a million."—Life.

War Is Certainly Terrible

This letter was received by the U. S. Veterans Bureau.

Mr. Headquarters,
U. S. Armory

Dear Mr. Headquarters:

My husband was induced into the surface long months ago. I ain't received no pay from him since he was gone. Please send me my clopement as I have a four months old baby and he is my only support and I kneed it every day to buy food and keep us enclosed.

I am a poor woman and all that I have is at the front. Both sides of my parents are very old and I can't suspect anything from them as my mother has been in bed thirteen years.

My husband is in charge of a spitoon. Do I get any more than I am going to get? Please send me a letter and tell me if my husband made application for a wife and child and please send me a wife form to fill out.

I have already written to Mr. Collidge and get no answer. If I don't hear from you I will write Uncle Sam about you and him.

Yours truly, ————

PS. My husband says he sets in the Y. W. C. A. every nite with the piano playing in his uniform. I think you can find him there.

Who Gave In?

Said the small boy—"My maw and paw had an awful time getting married. Maw wouldn't marry paw when he was drunk and paw wouldn't marry maw when he was sober."—Doherty News.

Practical Prayer

The boat was sinking. The skipper rushed up to the crowd of scared passengers.

"Who among you can pray," he asked them.

"I can, answered the minister.

"Then pray, mister," ordered the skipper. "The rest of you put on life preservers. We're one short."—Hammermill Bond.

Kate: "A shoulder strap sure is an important little article, isn't it?"

Placate: "Yes, it's the only thing that keeps an attraction from becoming a sensation."

"I'm sorry," said the pitcher, "but if Biggins is going to umpire today, I don't think I better play."

"Why not?" inquired the manager.

"You see, it's this way," explained the pitcher. "Last winter when I was down in Florida I sold him a lot."—Life.

"Oh, Henry! Do come into the kitchen. There's a mouse squeaking dreadfully."

"Eh—what d' you say? Blame it all—can't you oil it yourself?

Famous Sayings

Cleopatra—You're an easy mark, Anthony.

Samson—I'm strong for you, kid.

David—The bigger they are the harder they fall.

Helen of Troy—So this is Paris.

Noah—It floats.

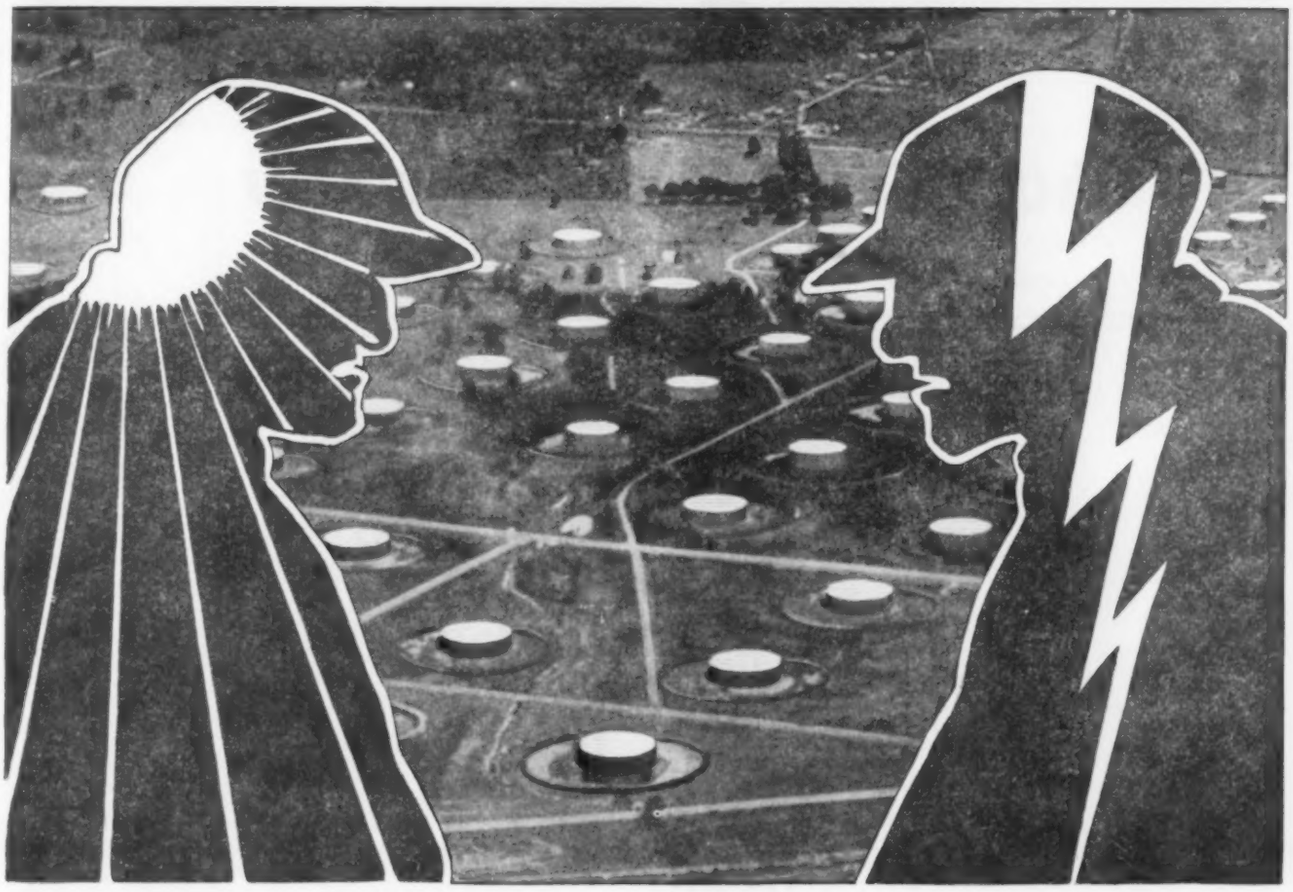
Methuselah—The first hundred years are the hardest.

"Do you believe the prohibition act will never be repealed?"

"What for?"

Why don't you ask your husband's advice on the matter?

I intend to, as soon as I decide on what I'm gonig to do.—Boston Transcript.



Robbers of storage tanks
—evaporation and lightning

SAFEGUARD your tankage against these two great thieves of stored oil and gasoline.

Johns-Manville Vapor Tight Tank Insulated Tops* cut evaporation losses to a minimum, as has been demonstrated on tankage of millions of barrels total capacity.

We have developed an effective system of protecting tanks against lightning, which includes Johns-Manville Grounded Conductor Network.** Upward of twenty-seven million barrels oil reservoir storage is now using this protection.

Complete information regarding both these safeguards will be furnished promptly on request.

*Patented, other patents pending.

**Patents pending.

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Back of Every Single

Reed Rotary Tool

out in the fields of the world, stand men whose one thought and high ambition are that those tools shall give results that satisfy

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Must Pass Two Separate Inspections for

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